Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

AIR QUALITY PERMIT

Permittee Name:	**Weyerhaeuser Company, Hawesville Operations**
Mailing Address:	**Attn: Dennis P. Waldroup** **P.O. Box 130** **Hawesville, Hancock County, Kentucky 42348**
Source Name:	**Weyerhaeuser Company, Hawesville Operations**
Source Address:	**58 Wescor Road**
Source Location:	**Hawesville, Hancock County, Kentucky 42348**
Permit Type:	**Federally Enforceable**
Review Type:	**Title V, PSD**
Permit Number:	**V-04-012**
Log Number:	**51211/G424**
Application Complete Date:	**December 30, 2000**
KYEIS ID #:	**021-091-00005**
SIC Code:	**2611**
Region:	**Owensboro**
County:	**Hancock**
Issuance Date:	
Expiration Date:	

John S. Lyons, Director
Division for Air Quality

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SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Kentucky Mills:

KMM Ceased Operation:

EIS No.	Emission Point	Description
004	01 (C-1)	Digester
	(C-2)	Blow Tank
	(C-50)	(Vented to the KMM
	04 (04)	Wastewood Boiler or Standby Flare)

EIS	Emission Point	Description
005	2 (C-10)	Washer Hood Exhaust
	(C-11)	Washer Vacuum Pump
	(C-12)	1 & 2 Filtrate Tank Vent

EIS No.	Emission Point	Description
003	37 (C-20)	Fourdrinier Duct
	(C-21)	Low Vacuum Exhaust
	(C-22)	Vacuum Breaker Exhaust
	(C-23)	Vacuum Separator Exhaust
	(C-24)	North Vacuum Separator
	(C-25, C-26, C-26, C-27, C – 28, C-29)	Dryer Hoods

EIS No.	Emission Point	Description
013	5 (C-30)	KMM pulp HD Chest
	(C-31)	KMM recycled fiber HD Chest

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 6 - KMM Package Boiler

EIS No.	Emission Point	Description
001	01(C-40)	Package Boiler

Installed: **March 1985**
Primary Fuel: **Natural Gas**
Secondary Fuel: **Fuel oil**
Maximum Rated Capacity: **180 mmBTU/Hour**
Description/purpose: **Standby Boiler**

APPLICABLE REGULATIONS:

401 KAR 59:015, *New indirect heat exchangers constructed after April 9, 1972*, applies to the particulate, sulfur dioxide and visible emissions.
401 KAR 60:005 (40 CFR Subpart Db) *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units* constructed, modified, or reconstructed after June 19, 1984
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

401 KAR 60:005 (40 CFR Subpart Dc) *Standards of Performance for Industrial-Commercial-Institutional steam Generating Units* is not applicable since the boiler was constructed prior to May 9, 1989.

1. **Operating Limitations:**

   a. Annual usage of the secondary fuel oil shall not exceed 665,000 gallons per year based on an average heat content of 150,000 BTU/gal.
   b. The sulfur content of the secondary fuel oil shall not exceed 0.764 percent based on an average heat content of the oil of 150,000 BTU/gal.

   Compliance Demonstration Method:

   a. Maintain a log of secondary fuel usage and heat content when purchasing secondary fuel.
   b. Require or perform a sulfur analysis on each new purchase of fuel oil and maintain a log of the sulfur analysis for the purchased fuel oil.

2. **Emission Limitations:**

   a. PM emissions shall not exceed 0.1 lbs./ mmBTU [401 KAR 59:015 Section 4 (1)(b)], and shall be less than 25 tons/yr to preclude 401 KAR 51:017.
   b. Opacity shall not exceed 20 % (Permitted conditions more stringent) [401 KAR 59:015,

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Section 4 (2)].

c. SO_2 emissions shall not exceed 0.92 lbs./ mm BTU [401 KAR 59:015, Section 5 (1)(c)(1.)].

d. NO_x emissions shall be less than 0.20 lbs./ mmBTU [401 KAR 59:015, Section 6]. Annual NO_x emissions shall be less than 40 tons/yr to preclude 401 KAR 51:017.

Compliance Demonstration Method:

a. For PM_{10} lbs./mmBTU emission limit:
Lbs/mmBTU PM_{10} Emission Rate = [(Total Monthly gas or fuel oil consumption rate x AP-42 Emission factor (Please reference Kentucky Emissions Inventory)) / (Total Hours of operation per month x Total Hourly Rated Capacity)]

b. For PM_{10} Annual emission limits:
Annual Emission Rate = Sum (any consecutive 12 month) of Natural Gas or Fuel Oil Usage Rate (10^6 cubic feet natural gas or gallons of fuel oil) x AP-42 Emission factor (Please reference Kentucky Emissions Inventory) / 2000

c. For SO_2 lbs./mmBTU emission limit:
Lbs/mmBTU SO_2 Emission Rate = [(Total Monthly gas or fuel oil consumption rate x AP-42 Emission factor (Please reference Kentucky Emissions Inventory)) / (Total Hours of operation per month x Total Hourly Rated Capacity)]

d. For NO_x lbs./mmBTU emission limit:
Lbs/mmBTU NOx Emission Rate = [(Total Monthly gas or fuel oil consumption rate x AP-42 Emission factor (Please reference Kentucky Emissions Inventory)) / (Total Hours of operation per month x Total Hourly Rated Capacity)]

e. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements**.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 performance testing using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division for Air Quality.

4. Specific Monitoring Requirements:

a. Pursuant to State Regulation 401 KAR 59:015, the rate of natural gas or fuel oil usage shall be measured daily and recorded. The heating value shall be ascertained at least on an annual basis.

b. The permittee shall monitor and maintain records of the following information:
   1. The total monthly (each calendar month) KMM Package Boiler fuel usage.
   2. The hours per month of operation for the unit.
   3. Once per calendar day when the unit is operating the permittee shall survey the emission unit associated with Unit 6 (emission point C-40) for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9 immediately.

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5. Specific Recordkeeping Requirements:

a. The facility shall maintain records of the amount of fuel, and fuel analysis of the natural gas and fuel oil burned in the boiler.

b. Records in the daily/weekly/monthly log shall include but not limited to the following:
   i. Whether any air emissions were visible from the unit.
   ii. Whether the visible emissions were normal for the unit.
   iii. The cause of any abnormal emissions and any corrective action taken.

c. The permittee shall also maintain records of the following information:
   1. The total monthly (each calendar month) fuel usage in Boiler.
   2. The hours per month and months per year of operation for the unit.
   3. Refer to the above monitoring requirements.
   4. Respective monthly pollutant emission rates.

6. Specific Reporting Requirements:

Fuel analysis required under 40 CFR 60 Subpart Db, shall be submitted semiannually.

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 7 - KMM No. 2 Waste Wood Boiler:

EIS No.	Emission Point	Description
011	11 (C-50)	No. 2 Hogged Fuel Boiler

Installed: **March 1981**
Primary Fuel: **Natural Gas**
Secondary Fuel: **Fuel oil**
Maximum Rated Capacity: **400 mmBTU/hr**
Description/purpose: **Standby Boiler**

APPLICABLE REGULATIONS:

401 KAR 59:010. *New Process Operations* constructed after July 2, 1975
401 KAR 60:005 (40 CFR Subpart D) *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced after August 17, 1971*
401 KAR 59:015 *New indirect heat exchangers constructed after April 9, 1972*, applies to the nitrogen oxides, particulate, sulfur dioxide and visible emissions.
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

401 KAR 61:015, *Existing indirect heat exchangers*
401 KAR 60:005 (40 CFR Subpart Dc) *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units* constructed after June 9, 1989.
401 KAR 60:005 (40 CFR Subpart Db) *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units* constructed, modified, or reconstructed after June 19, 1984

1. Operating Limitations:

Fuel oil shall have less than 0.50% sulfur content.

Compliance Demonstration Method:

a. Require or perform a sulfur analysis on each new purchase of fuel oil and maintain a log of the sulfur analysis for the purchased fuel oil.
b. The facility shall maintain records of the fuel oil burned in the boiler.

2. Emission Limitations:

a. PM/PM10 emissions from the boiler combustion shall not exceed 0.04 gr/dscf from boiler gases [401 KAR 51:017], and shall not exceed 0.1 lbs./ mmBTU [401 KAR 59:015 Section 4 (1)(b)].
b. The opacity of visible emissions shall not exceed 20%, except a maximum of 27%

opacity of visible emissions, shall be permissible for not more than one six-minute period in any sixty consecutive minutes [401 KAR 59:015, Section 4 (2)].

c. SO_2 emissions shall not exceed 0.315 lbs./ mmBTU [401 KAR 51:017].
d. NO_x emissions shall be less than 0.40 lbs./ mmBTU [401 KAR 59:015, Section 6].
e. VOC emissions measured as methane shall not exceed 99 tons/yr [401 KAR 51:017].
f. Wood Fuel Dryer PM/PM10 emissions vented through Hogged Fuel Boiler shall not exceed 3.42 lbs/hr and 14.36 TPY.

Compliance Demonstration Method:

Note: The conversion equations:
lb/hr (pollutant emission rate) = [ton/yr(TPY)] * [2000 lbs/ton]/[operating hours/yr]
lb/hr (pollutant emission rate) = [pollutant emission rate (lbs/yr)]/[operating hours/yr]

a. For PM/PM_{10} lbs./mmBTU emission limit:
Lbs/mmBTU PM_{10} Emission Rate = [(Total Monthly gas or fuel oil consumption rate x AP-42 Emission factor (Please reference Kentucky Emissions Inventory)) / (Total Hours of operation per month x Total Hourly Rated Capacity)]
b. For PM/PM_{10} Annual emission limits (TPY):
Annual Emission Rate = [Sum (any consecutive 12 month) of Natural Gas or Fuel Oil Usage Rate (10^6 cubic feet natural gas or gallons of fuel oil) x AP-42 Emission factor (Please reference Kentucky Emissions Inventory)]/2000
c. For SO_2 lbs./mmBTU emission limit:
Lbs/mmBTU SO_2 Emission Rate = [(Total Monthly gas or fuel oil consumption rate x AP-42 Emission factor (Please reference Kentucky Emissions Inventory)) / (Total Hours of operation per month x Total Hourly Rated Capacity)]
d. For NO_x lbs./mmBTU emission limit:
Lbs/mmBTU NOx Emission Rate = [(Total Monthly gas or fuel oil consumption rate x AP-42 Emission factor (Please reference Kentucky Emissions Inventory)) / (Total Hours of operation per month x Total Hourly Rated Capacity)]
e. For VOC Annual emission limit:
Annual Emission Rate = Sum (any consecutive 12 months) Natural Gas or fuel oil Usage Rate (10^6 cubic feet natural gas or gallons) x AP-42 emission factor (lbs/10^6 cubic feet or lbs/gallon of 1000 gallons)
f. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** during all periods.

3. <u>Testing</u> <u>Requirements</u>:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1, performance testing using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division for Air Quality.

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4. Specific Monitoring Requirements:

a. Pursuant to State Regulation 401 KAR 59:015, the rate of natural gas or fuel oil usage shall be measured daily and recorded. The heating value shall be ascertained at least on an annual basis.
b. The permittee shall monitor and maintain records of the following information:
   1. The total monthly (each calendar month) fuel usage the boiler.
   2. The hours per month of operation for the unit.
   3. Once per calendar day when the unit is operating the permittee shall survey the emission unit associated with KMM No. 2 Waste Wood Boiler for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9 immediately.

5. Specific Recordkeeping Requirements:

a. The facility shall maintain records of the amount of fuel, and fuel analysis of the natural gas and fuel oil burned in the boiler.
b. Records in the daily/weekly/monthly log shall include but not limited to the following:
   i. Whether any air emissions were visible from the unit.
   ii. Whether the visible emissions were normal for the unit.
   iii. The cause of any abnormal emissions and any corrective action taken.
c. The permittee shall also maintain records of the following information:
   1. The total monthly (each calendar month) fuel usage in this Boiler.
   2. The hours per month and months per year of operation for the unit.
   3. Refer to the above monitoring requirements.
   4. Respective monthly pollutant emission rates.

6. Specific Reporting Requirements:

Fuel analysis shall be performed in accordance with 401 KAR 59:015, Section 7(2)(e). Results of the fuel analysis shall be submitted semiannually.

7. Specific Control Equipment Operating Conditions: None

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Unit 8 - KMM Process water Treatment:

EIS No.	Emission Point	Description
006	8 (C-60)	KMM Process Water Treatment

Installed: **April 1969**
Maximum Rated Capacity: **5.0 Million gallons per day**
Description/purpose: **Physical and biological treatment of process water**

APPLICABLE REGULATIONS: None

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

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Unit 10 – KMM Gasoline Storage Tank:

EIS No.	Emission Point	Description
007	10 (C-80)	Gasoline Storage Tank

Installed: December 1989
Maximum Rated Capacity: 1000 gallons maximum storage capacity
Description/purpose: Fuel Storage

APPLICABLE REGULATIONS:

401 KAR 59:050 *New storage vessels for petroleum liquids* constructed on or after April 9, 1972 and prior to July 24, 1984 with a storage capacity less than or equal to 151,400 liters (40,000 gallons), and to each affected facility with a storage capacity less than 40,000 liters (10,567 gallons) constructed on or after July 24, 1984, which is located in an urban county designated nonattainment for ozone under 401 KAR 51:010 or in any other county and is a part of a major source of volatile organic compounds.

REGULATIONS NOT APPLICABLE:

401 KAR 61:050 *Standards of Performance of Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and prior to May 19, 1978* does not apply because no petroleum liquids are stored or the tanks were constructed prior to the above dates.
401 KAR 60:005 (40 CFR Subpart K) *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.*
401 KAR 60:005 (40 CFR 60 Subpart Ka) *Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and prior to July 23, 1984*
401 KAR 60:005 (40 CFR 60 Subpart Kb) *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*

1. **Operating Limitations:**

   The owner or operator of each storage vessel that commenced construction on or after April 9, 1972, that has a storage capacity greater than 2,195 liters (580 gallons), and if the true vapor pressure of the petroleum liquid, as stored, is equal to or greater than ten and three-tenths (10.3) kPa (one and five-tenths (1.5) psia), as a minimum the tank shall be equipped with a permanent submerged fill pipe [401 KAR 59:050, Section 3(b)(2)].

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Compliance Demonstration Method:

Maintain tank diagrams/blueprints to verify the existence of the submerged fill pipe.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

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Unit 11 – Unpaved Mill Roads:

EIS No.	Emission Point	Description
008	11 (C-90)	Unpaved Plant Roads

Installed: **January 2001**
Maximum Rated Capacity: **0.2 square miles**
Description/purpose: **Transportation on site**

APPLICABLE REGULATIONS:
401 KAR 63:010, *Fugitive emissions*

REGULATIONS NOT APPLICABLE:
N/A

1. **Operating Limitations:**

   No unpaved road shall be used without taking reasonable precaution to prevent particulate matter from becoming airborne [401 KAR 63:010 Section 3].
   The application and maintenance of asphalt, oil, water, or suitable chemicals on roads, shall be used to reduce airborne dusts [401 KAR 63:010 Section 3(b)].

   Compliance Demonstration Method:

   Maintain records of the operational practices used to prevent particulate from becoming airborne.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

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Unit 12 – Paved Mill Roads:

EIS No.	Emission Point	Description
009	12 (C-100)	Paved Plant Roads

Installed:
Maximum Rated Capacity: 0.1 square miles
Description/purpose: Transportation on site

APPLICABLE REGULATIONS:
401 KAR 63:010, *Fugitive emissions*

REGULATIONS NOT APPLICABLE:
N/A

1. **Operating Limitations:**

   No paved road shall be used without taking reasonable precaution to prevent particulate matter from becoming airborne [401 KAR 63:010 Section 3].
   The application and maintenance of asphalt, oil, water, or suitable chemicals on roads, shall be used to reduce airborne dusts [401 KAR 63:010 Section 3(b)].

   Compliance Demonstration Method:

   Maintain records of the operational practices used to prevent particulate from becoming airborne.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

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Unit 14 – BPM Continuous Digester System:

EIS No.	Emission Point	Description
038	30 (B-1)	Continuous Digester System

Installed: **March 1997**
Maximum Rated Capacity: **659,050 air dried tons per year**
Description/purpose: **To produce kraft pulp from wood chips**
Control Equipment: **LVHC's vented to the NCG/SOG Incinerator or the No. 3 Lime Kiln; HVLC's vented to Incinerator or Bio-fuel Boiler (BFB)**

APPLICABLE REGULATIONS:
401 KAR 59:080, *New kraft (sulfate) pulp mills* constructed after April 9, 1972
401 KAR 63:002 (40 CFR 63 Subpart S), *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*
401 KAR 60:005, (40 CFR 60 Subpart BB), *Standards of Performance for Kraft Pulp Mills*
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

401 KAR 61:025, *Existing kraft (sulfate) pulp mills* constructed prior to April 9, 1972

1. Operating Limitations:

a. 1. Noncondensable gas streams containing total reduced sulfur shall be combusted at all times in the NCG/SOG Incinerator for at least 0.5 seconds at 1200°F, or
   2. In the No.3 Lime Kiln, or
   3. Bio-fuel Boiler (BFB) [40 CFR 60.283 Subpart BB and 401 KAR 59:080].

b. 1. HAPs emissions shall be captured and incinerated at all times in the incinerator at1600°F for at least 0.75 seconds, or
   2. Reduce the total HAP emissions in the #3 Lime Kiln or BFB or recovery furnace by introducing the HAP with the primary fuel or into the flame zone, or
   3. Reduce the total HAP emissions at the outlet of the thermal oxidizer by 98 percent or more by weight, or
   4. Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis [40 CFR 63.443].

c. The permittee shall monitor and maintain records for a Leak Detection and Repair Program pursuant to 40 CFR 63.453.

d. The permittee shall collect and treat any condensate to meet requirements specified under 40 CFR 63.443(a)(1)(i).

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Compliance Demonstration Method:

Please refer to **Items 4 and 5** under this emission point.

The permittee shall maintain and keep records of the methods which are being used to comply with the operating limitations.

2. Emission Limitations:

Pursuant to 40 CFR 60.283(a)(1)(vi), uncontrolled gases shall contain less than 0.01 lbs TRS/ ton of air dried pulp (ADP).

Compliance Demonstration Method:

a. The permittee shall collect and treat any condensate to meet the above limits.
b. Please refer to **Items 4 and 5** under this emission point.

3. Testing Requirements:

a. Performance testing for HAPs shall be done at the required times and using the methods and procedures specified at 40 CFR 63.457, Test methods and procedures. Records shall be kept of the testing requirements which are applicable.
b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous HAP monitoring system [40 CFR 63.453(a)]; or
b. The temperature of the thermal oxidizer shall be maintained and monitored [40 CFR 60.284(b)(1), 401KAR 59:589 and 40 CFR 63.453].
c. Pursuant to 40 CFR 63.453, implement an acceptable Leak Detection and Repair Program (LDAR) for each enclosure and closed-vent system.
d. Pursuant to 40 CFR 63.446, contaminated condensates shall be collected and treated. Refer to **Section B.1.b.**, addressed under this emission point.

5. Specific Recordkeeping Requirements:

a. Record all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200° F in the incinerator [40 CFR 60.284 (d) and 401 KAR 59:080].
b. Pursuant to 40 CFR 63.443, Standards for the pulping system, record any down time on the control system of greater than four percent for HVLC's and one percent for LVHC's.

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c. Pursuant to 40 CFR 63.443 and 63.454, record all required monitoring inspections under the LDAR program.
d. Pursuant to 40 CFR 63.446, record periods when the condensate collection and treatment requirements are not being met.
e. The permittee shall maintain a log indicating the switching date from one control device to another for the Continuous Digester System. Identify the control device, switch date, and duration of time to specific control device.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 60.284 (d) and 401 KAR 59:080, all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200° F must be reported on a semiannual basis.
b. Pursuant to 40 CFR 63.455, report periods when standards [40 CFR 63.443] are not in compliance.
c. Pursuant to 40 CFR 63 Subpart S, report down time on the control system of greater than four percent for HVLC's and one percent for LVHC's on a semiannual basis.
d. Pursuant to 40 CFR 63.446, reports of periods when the condensate collection and treatment requirements are not being met must be kept and reported semiannually.

7. Specific Control Equipment Operating Conditions:
Refer to Lime Kiln #3, NCG/SOG Incinerator, or Bio-fuel Boiler (BFB) .

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Unit 19 – BPM No. 2 Bleach Plant:

EIS No.	Emission Point	Description
016a	16(B-100)	No.2 ClO_2 Bleach Plant

Installed: **September 1998**
Maximum Rated Capacity: **182,500 air dried tons per year**
Description/purpose: **To bleach wood pulp**
Control Equipment: **Bleach Plant Scrubber**

APPLICABLE REGULATIONS:

401 KAR 63:002 (40 CFR 63 Subpart S), *National Emission Standards for Hazardous Air Pollutants for the Pulp and Paper Industry*

REGULATIONS NOT APPLICABLE: NA

1. **Operating Limitations:**
   Pursuant to 40 CFR 63.445(c), a scrubber required to control emissions of HAPs shall be operated.

   Compliance Demonstration Method:
   Refer to **Items 4 and 5** under this emission point.

2. **Emission Limitations:**

   a. Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99 percent or more by weight [40 CFR 63.445(c)(1)]; or
   b. Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP [40 CFR 63.445(c)(2)]; or
   c. Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of ODP [40 CFR 63.445(c)(3)].

   Compliance Demonstration Method:
   a. The permittee shall operate the scrubber in accordance with the manufacturer's specifications to attain emission limitations specified in Section 2 above.
   b. The scrubber shall be monitored, operated, and the records shall be kept for the given parameters specified under **Sections B.4. 5., and 7**, respectively**,** for this emission point.
   c. Compliance shall also be demonstrated through Implementation of a Leak Detection and Repair Program for the closed vent system.

3. **Testing Requirements:**

   a. Performance testing for HAPs shall be performed using the methods and procedures

specified at 40 CFR 63.457, Test methods and procedures.

b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system for the scrubber parameters [40 CFR 63.453(a)]. Please refer to **Item 7** under this emission point.
b. Pursuant to 40 CFR 63.453, monitor scrubbing liquid pH, scrubbing liquid flow rate, and, scrubber inlet pressure (vacuum).
c. Pursuant to 40 CFR 63.453, implement a Leak Detection and Repair Program (LDAR) for each enclosure and closed-vent system.

5. Specific Recordkeeping Requirements:

a. Pursuant to 40 CFR 63.454, records of all required inspections under the LDAR program and continuous monitoring must be maintained.
b. For compliance demonstration purposes, the permittee shall:
    1. Maintain records on the B-100 Bleach Plant Scrubber System operating parameters as listed in Subsection **7. Specific Control Equipment Operating Conditions** below;
    2. Summarize the closed-vent operations venting to the B-100 Bleach Plant Scrubber System monthly including a summary of leaking and non-leaking devices and the repair logs, and
    3. During any onsite visit, specific records (monthly production) for this area shall be made available for inspection at the request of the Regional inspector.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 63.455, submit compliance testing report.
b. Pursuant to 40 CFR 63.455, submit results of the LDAR monitoring program.

7. Specific Control Equipment Operating Conditions:

The permittee shall monitor the following operating parameters at the frequency indicated for this scrubber.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Operating Parameters for the Bleach Plant Scrubber

Parameter	Monitoring Frequency	Acceptable Range
Scrubbing Liquor Flow Rate	Continuous	> 51 gpm
Scrubbing Liquid pH	Continuous	> 10 pH
Scrubber Inlet Pressure (or vacuum)	Continuous	<-10 inches H_2O

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 20 – BPM No. 3 Bleach Plant:

EIS No.	Emission Point	Description
016b	16(B-100)	No.3 ClO_2 Bleach Plant

Installed: **March 1998**
Maximum Rated Capacity: **438,000 air dried tons per year**
Description/purpose: **To bleach wood pulp**
Control Equipment: **Bleach Plant Scrubber**

APPLICABLE REGULATIONS:

401 KAR 63:002 (40 CFR 63 Subpart S), *National Emission Standards for Hazardous Air Pollutants for the Pulp and Paper Industry*

REGULATIONS NOT APPLICABLE: NA

1. **Operating Limitations:**

   Pursuant to 40 CFR 63.445(c), a scrubber required to control emissions of HAPs shall be operated.

   Compliance Demonstration Method:

   Refer to **Item 7** under this emission point.

2. **Emission Limitations:**

   a. Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99 percent or more by weight [40 CFR 63.445(c)(1)]; or
   b. Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP [40 CFR 63.445(c)(2)]; or
   c. Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of ODP [40 CFR 63.445(c)(3)].

   Compliance Demonstration Method:

   a. The permittee shall operate the scrubber in accordance with the manufacturer's specifications to attain the emission limitations contained above.
   b. The scrubber shall be monitored, operated, and the records shall be kept for the given parameters specified under **Sections B.4. 5., and 7**, respectively, for this emission point.
   b. Compliance shall also be demonstrated through Implementation of a Leak Detection and Repair (LDAR) Program for the closed vent system.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

3. Testing Requirements:

a. Performance testing for HAPs shall be performed using the methods and procedures specified at 40 CFR 63.457, Test methods and procedures.
b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8, performance testing of non-HAPs using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system for the scrubber parameters [40 CFR 63.453(a)]. Refer to **Item 7** under this emission point.
b. Pursuant to 40 CFR 63.453, monitor scrubbing liquid pH, scrubbing liquid flow rate, and, scrubber inlet pressure (vacuum).
c. Pursuant to 40 CFR 63.453, implement an acceptable Leak Detection and Repair Program (LDAR) for each enclosure and closed-vent system.

5. Specific Recordkeeping Requirements:

a. Pursuant to 40 CFR 63.454, records of all required inspections under the LDAR program and continuous monitoring must be maintained.
b. For compliance demonstration purposes, the permittee shall:
    1. Maintain records on the B-100 Bleach Plant Scrubber System operating parameters as listed in Subsection **7. - Specific Control Equipment Operating Conditions** below;
    2. Summarize the closed-vent operations venting to the B-100 Bleach Plant Scrubber System monthly including also a summary of leaking and non-leaking devices and the repair logs, and
    3. During any onsite visit, specific records (monthly production) for this area shall be made available for inspection at the request of the Regional inspector.
    4. The permittee shall maintain a log of the LDAR inspections.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 63.455, submit compliance testing report.
b. Pursuant to 40 CFR 63.455, submit results of the LDAR monitoring program.

7. Specific Control Equipment Operating Conditions:

The permittee shall monitor the following operating parameters at the frequency indicated for this scrubber.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Operating Parameters for the Bleach Plant Scrubber

Parameter	Monitoring Frequency	Acceptable Range
Scrubbing Liquor Flow Rate	Continuous	> 51 gpm
Scrubbing Liquid pH	Continuous	> 10 pH
Scrubber Inlet Pressure (or vacuum)	Continuous	<-10 inches H_2O

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 21 – BPM ClO_2 Generator:

EIS No.	Emission Point	Description
015	15(B-100)	Chlorine Dioxide Generator

Installed: **February 1998**
Maximum Rated Capacity: **620,500 air dried tons per year**
Description/purpose: **To produce the Chlorine Dioxide solution used in the bleaching of chemical wood pulp.**
Control Equipment: **Bleach Plant Scrubber**

APPLICABLE REGULATIONS:

401 KAR 63:002 (40 CFR 63 Subpart S), *National Emission Standards for Hazardous Air Pollutants for the Pulp and Paper Industry*
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE: NA

1. **Operating Limitations:**

   Pursuant to 40 CFR 63.445(c), a scrubber required to control emissions of HAPs shall be operated.

   Compliance Demonstration Method:

   Please refer to **Item 7** under this emission point.

2. **Emission Limitations:**

   a. Reduce the total chlorinated HAP mass in the vent stream entering the control device by 99 percent or more by weight [40 CFR 63.445(c)(1)]; or
   b. Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP [40 CFR 63.445(c)(2)]; or
   c. Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of ODP [40 CFR 63.445(c)(3)].

   Compliance Demonstration Method:
   a. The permittee shall operate the scrubber in accordance with the manufacturer's specifications to attain emission limitations specified in Section 2 above.
   b. The scrubber shall be monitored, operated, and the records shall be kept for the given parameters specified under **Sections B.4, 5, and 7**, respectively, for this emission point.
   c. Compliance shall also be demonstrated through; Implementation of a Leak Detection and Repair (LDAR) Program for the closed vent system.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

3. Testing Requirements:

a. Performance testing for HAPs shall be performed using the methods and procedures specified at 40 CFR 63.457, Test methods and procedures.
b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system for the scrubber parameters [40 CFR 63.453(a)]. Refer to **Item 7** under this emission point.
b. Pursuant to 40 CFR 63.453, monitor scrubber liquid pH, scrubber liquid flow rate, and, scrubber inlet pressure (vacuum).
c. Pursuant to 40 CFR 63.453, implement an acceptable Leak Detection and Repair Program (LDAR) for each enclosure and closed-vent system.

5. Specific Recordkeeping Requirements:

a. Pursuant to 40 CFR 63.454, records of all required inspections under the LDAR program and continuous monitoring must be maintained.
b. For compliance demonstration purposes, the permittee shall:
    1. maintain records on the B-100 Bleach Plant Scrubber System operating parameters as listed in Subsection **7. Specific Control Equipment Operating Conditions** below;
    2. summarize the closed-vent operations venting to the B-100 Bleach Plant Scrubber System monthly including also a summary of leaking and non-leaking devices and the repair logs, and
    3 during any onsite visit, specific records (monthly production) for this area shall be made available for inspection at the request of the Regional inspector.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 63.455, submit compliance testing report.
b. Pursuant to 40 CFR 63.455, submit results of the LDAR monitoring program.

7. Specific Control Equipment Operating Conditions:

The permittee shall monitor the following operating parameters at the frequency indicated for this scrubber.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Operating Parameters for the Bleach Plant Scrubber

Parameter	Monitoring Frequency	Acceptable Range
Scrubbing Liquor Flow Rate	Continuous	> 51 gpm
Scrubbing Liquid pH	Continuous	> 10 pH
Scrubber Inlet Pressure (or vacuum)	Continuous	<-10 inches H_2O

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 22 – BPM Multiple Effect Evaporator System:

EIS No.	Emission Point	Description
019	31 (vented to B-700)	Multiple Effect Evaporators Condensate Stripper

Installed: **October 1997**
Maximum Rated Capacity: **967,250 tons of Black Liquor Solids (BLS) per year**
Description/purpose: **To evaporate water from the spent pulping chemical (black liquor) to facilitate its combustion in the Recovery Boilers/Furnace(s).**
Control Equipment: **LVHC's and SOG's vented to the NCG/SOG Incinerator, Lime Kiln, BFB, or Recovery Boiler**

APPLICABLE REGULATIONS:

401 KAR 59:080, *New Kraft (sulfate) pulp mills constructed after to April 9, 1972*
401 KAR 63:002 (40 CFR 63 Subpart S), *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 60:005 (40 CFR 60 Subpart BB), *Standards of Performance for Kraft Pulp Mills*

REGULATIONS NOT APPLICABLE: None

1. Operating Limitations:

a. Pursuant to 40 CFR 60.283 and 401 KAR 59:080, non-condensable exhaust gases which are Low Volume High Concentration (LVHC) from the evaporators shall be vented to either the NCG/SOG Incinerator for a least 0.5 seconds at 1200 degrees F or to the No. 3 Lime Kiln, BFB, or Recovery Boiler.
b. Pursuant to 40 CFR 63.443, LVHC and Stripper Off Gases (SOG) emissions shall be captured and incinerated by the NCG/SOG Incinerator at 1600°F for at least 0.75 seconds; or reduce total HAP emissions by 98% or more by weight; or reduce the total HAP concentration at the outlet of the thermal oxidizer (incinerator) to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or reduce the total HAP emissions using a boiler, lime kiln, or recovery furnace/boiler by introducing the HAP emission stream with the primary fuel or into the flame zone.
c. Pursuant to 40 CFR 63.443 (a), the permittee shall operate and maintain an enclosed collection system which is assured to have a 98% treatment efficiency.
d. Emissions shall only be vented to the NCG/SOG Incinerator or No. 3 Lime Kiln, BFB Boiler or Recovery Furnace/Boiler.
e. Pursuant to 40 CFR 63.446, contaminated condensates shall be collected and treated.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Compliance Demonstration Method:

a. The permittee shall maintain records of which limitation is applicable in **Section B.1.b.** under operating limitations for this emission point.
b. The permittee shall monitor and maintain records for a Leak Detection and Repair Program on the closed-vent system.
c. The permittee shall collect and treat any condensate to meet requirements specified under 40 CFR 63.443(a)(1)(i).
d. Please refer to **Items 4 and 5** under this emission point.

2. Emission Limitations:

NA

3. Testing Requirements:

a. Performance testing for HAPs shall be performed using the methods and procedures specified at 40 CFR 63.457, Test methods and procedures.
b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8, performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall install/operate, calibrate, certify, and maintain according to the manufacturer's specifications, a continuous monitoring system for HAP emissions for the respective control equipment: the NCG/SOG Incinerator, No. 3 Lime Kiln, BFB, or Recovery Boiler [40 CFR 63.453(a)].
b. Pursuant to 40 CFR 60.284(b)(1), and 401KAR 59:080, the temperature of the thermal oxidizer shall be maintained and monitored.
c. Pursuant to 40 CFR 63.453, the permittee shall implement a Leak Detection and Repair Program (LDAR) for each closed-vent system.
d. Pursuant to 40 CFR 63.453, if the condensate stripper is used as a treatment device, the permittee shall monitor and maintain process water (condensate) feed rate and steam feed rate (or steam to condensate ratio), and stripper column feed temperature or outlet methanol concentration.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

5. Specific Recordkeeping Requirements:

a. Pursuant to 40 CFR 60.284 (d) and 401 KAR 59:080, record all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200° F, until the effective date of 40 CFR 63, Subpart S.
b. Pursuant to 40 CFR CFR 63.453, record all periods when none of the following control options are demonstrated: 1) emissions are captured and incinerated by the NCG/SOG at or above 1600°F for 0.75 seconds; or 2) or total HAP emissions are reduced by 98% or more by weight; or 3) the total HAP concentration at the outlet of the thermal oxidizer (incinerator) are 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis ; or 4) the total HAP emissions are controlled using the BFB boiler, No. 3 Lime Kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.
c. Pursuant to 40 CFR 63.443, record down time on the control system of greater than one percent during times when the LVHC HAP emissions are controlled.
d. Pursuant to 40 CFR 63.443 and 63.454, record all required inspections under the LDAR.
e. Pursuant to 40 CFR 63.446, records of periods when the condensate collection and treatment requirements are not being met must be kept.
f. The permittee shall maintain a log indicating the switching date from one control device to another for the Multiple Effect Evaporator System. Identify the control device, switch date, and duration of time to specific control device.
g. Should the condensate stripper be used as a treatment device, the permiteee shall maintain records on stripper downtime, including SSM and HAP reduction.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 60.284 (d) and 401 KAR 59:080, all periods in excess of 5 minutes and their duration during which the combustion temperature at the point of incineration is less than 1200° F must be reported on a semiannual basis, until the effective date of 40 CFR 63, Subpart S.
b. Pursuant to 40 CFR 63.454, report all periods when none of the following control options are demonstrated: 1) emissions are captured and incinerated by the NCG/SOG at or above 1600°F for 0.75 seconds; or 2) total HAP emissions are reduced by 98% or more by weight; or 3) the total HAP concentration at the outlet of the thermal oxidizer (incinerator) are 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or 4) the total HAP emissions are controlled using the BFB boiler, No. 3 Lime Kiln, recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.
c. Pursuant to 40 CFR 63 Subpart S, report down time on the control system of greater than one percent (excluding startup, shutdown and malfunction) for LVHC's and SOG's during times when the LVHC HAP emissions are controlled, on a semiannual basis.
d. Pursuant to 40 CFR 63.455, if the stripper is used as a control device, report down time on the stripper greater than ten percent including startup, shutdown and malfunction.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

e. Pursuant to 40 CFR 63.446, periods when the condensate collection and treatment requirements are not being met must be reported semiannually.
f. Pursuant to 40 CFR 63.453, if the condensate stripper is used as a treatment device, the permittee shall demonstrate compliance with the requirements of reduction of total HAP through the stripper using a continuous monitoring system (CMS). If compliance is based on the use of a biological treatment system, the compliance shall be based on daily composite samples and the percent reduction shall be determined quarterly.

7. Specific Control Equipment Operating Conditions:

Refer to Unit No. 40, NCG/SOG Incinerator.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 23 – BPM Recovery Area Strong and Heavy Black Liquor Tanks:

EIS No.	Emission Point	Description
032	(B-301, 303-309, 700, 900)	3 Recovery Area Strong and Heavy Black Liquor tanks

Installed: **October 1997**
Maximum Rated Capacity: **967,250 tons Black Liquor Solids per year**
Description/purpose: **To store spent pulping chemical (Black Liquor) while being processed**
Control Equipment: **NCG Incinerator or the Bio-fuel Boiler(BFB)**

APPLICABLE REGULATIONS: None

REGULATIONS NOT APPLICABLE:

401 KAR 60:005 (40 CFR 60 Subpart BB), *Standards of Performance for Kraft Pulp Mills;* Subpart BB is not applicable to Black Liquor Storage Tanks.
401 KAR 63:003 (40 CFR 63 Subpart S), *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry,* to be Implemented by April 2006. Strong or Heavy Black Liquor Storage Tanks are not subject to 40 CFR 63 Subpart S.
401 KAR 60:005 (40 CFR 60 Subpart Kb), *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*. Pursuant to final changes published in the Federal Register on October 15, 2003 for this Subpart, these Strong or Heavy Black Liquor Tanks are exempt because each tank is less than 40 cubic meters, does not contain a VOL, and is a process tank (i.e., each process tank feeds recovery furnace(s)). Exemptions are referenced at 40 CFR 60.110b(a), 60.110b(b), and 60.111b(c).

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** Refer to Unit No. 40 and 42, NCG Incinerator or the Bio-fuel Boiler(BFB), respectively.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS
Unit 24 or 9 – BPM Weak Liquor Tanks:

Note: Unit 9 will serve as a backup to Unit 24 and will meet same requirements

EIS No.	Emission Point	Description
012	24 (B-302)	Recovery Weak Black Liquor Tank
	(B-303)	Pulp Mill Weak Black Liquor Tank

Installed: **March 1997**
Maximum Rated Capacity: **967,250 tons Black Liquor Solids per year**
Description/purpose: **To store spent pulping liquor (black liquor) prior to it being processed for combustion.**
Control Equipment: **NCG Incinerator or the Bio-fuel Boiler(BFB)**

APPLICABLE REGULATIONS:

401 KAR 63:002 (40 CFR 63 Subpart S), *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry,* to be Implemented by April 2006.
401 KAR 60:005 (40 CFR 60 Subpart Kb), *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*

REGULATIONS NOT APPLICABLE: NA

1. Operating Limitations:

a. Pursuant to 40 CFR 63.443, no emissions from the above tanks, shall be vented to the atmosphere.
b. Pursuant to 40 CFR 63.443, HVLC/HAP emissions shall be captured and incinerated by the NCG/SOG incinerator at 1600°F for at least 0.75 seconds, or reduce total HAP emissions by 98% or more by weight; or reduce the total HAP concentration at the outlet of the thermal oxidizer (incinerator) to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or reduce the total HAP emissions using the Biomass
Boiler, No. 3 Lime Kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.

Compliance Demonstration Method:

a. The permittee shall monitor and maintain records for a Leak Detection and Repair (LDAR) Program on any closed-vent system.
b. Refer to **Items 4 and 5** under this emission point.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

2. Emission Limitations:

NA

3. Testing Requirements:

Performance testing for HAPs shall be performed using the methods and procedures specified at 40 CFR 63.457, Test methods and procedures.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 60.284(b)(1), 401 KAR 59:020, Section 4 and 40 CFR 63.453, the temperature of the thermal oxidizer shall be maintained and monitored.
b. The permittee shall install, calibrate, certify, operate, and maintain according to the manufacturer's specifications, a continuous monitoring system [40 CFR 63.453(a)].
c. Pursuant to 40 CFR 63.453, implement an acceptable Leak Detection and Repair Program (LDAR) for each enclosure and closed-vent system.

5. Specific Recordkeeping Requirements:

a. Pursuant to 40 CFR 60.116b Subpart Kb, the facility shall keep readily accessible records showing the dimensions of the storage vessels and an analysis showing the capacity of the storage vessels.
b. The facility shall maintain a monthly record of the type of Volatile Organic Liquid (VOL) stored in each vessel, and initially determine the maximum true vapor pressure of that VOL and whether there is a change in the material stored in the vessel.
c. Pursuant to 40 CFR 63 Subpart S, record all periods when none of the following control options are demonstrated: 1) emissions are captured and incinerated by the NCG/SOG at or above 1600°F for 0.75 seconds; or 2) total HAP emissions are reduced by 98% or more by weight; or 3) the total HAP concentration at the outlet of the thermal oxidizer (incinerator) are 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis ; or 4) the total HAP emissions are controlled using the BFB boiler, No. 3 Lime Kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.
d. Pursuant to 40 CFR 63.443, record downtime on the control system of greater than four percent for HVLC's during times when the LVHC HAP emissions are controlled.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 63.454, report all periods when none of the following control options are demonstrated: 1) emissions are captured and incinerated by the NCG/SOG

at or above 1600°F for 0.75 seconds; or 2) or total HAP emissions are reduced by 98% or more by weight; or 3) the total HAP concentration at the outlet of the thermal oxidizer (incinerator) are 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis ; or 4) the total HAP emissions are controlled using the

BFB boiler, No. 3 Lime Kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone, and shall be recorded and reported on a semiannual basis.

b. Pursuant to 40 CFR 63.455, report downtime on the control system of greater than four percent for HVLC's during times when the HVLC HAP emissions are controlled. on a semiannual basis.

c. Refer to **Item 4**, above.

7. <u>Specific</u> <u>Control</u> <u>Equipment</u> <u>Operating</u> <u>Conditions</u>:

Refer to Unit 40 and Unit 42, NCG Incinerator or the Bio-fuel Boiler(BFB), respectively.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 27 – BPM Recovery Boiler/Furnace No. 3:

EIS No.	Emission Point	Description
017	27 (B-304)	Recovery Boiler No. 3

Installed: **March 1987**
Primary Fuel: **Black Liquor Solids (BLS)**
Secondary Fuel: **Natural Gas or Fuel Oil (with less than 0.50% sulfur content)**
Maximum Rated Capacity: **383,250 tons black liquor solids per year**
Description/purpose: **To combust the organic portion of the black liquor for steam generation and recovery of the inorganic portion.**
Control Equipment: **Electrostatic Precipitator**

APPLICABLE REGULATIONS:

401 KAR 59:080, *New Kraft (sulfate) pulp mills constructed after April 9, 1972*
401 KAR 63:002 (40 CFR 63 Subpart MM), *National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills*
401 KAR 60:005 (40 CFR 60 Subpart BB), *Standards of Performance for Kraft Pulp Mills*
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

401 KAR 60:005, *40 CFR Part 60 standards of performance for new stationary sources* incorporates the regulations listed below:
40 CFR 60.40 (NSPS Subpart D), *Standards of Performance for Fossil- Fuel Fired Steam Generators over 250 mmBTU constructed after August 17, 1971*, because it is subject to 40 CFR 60.40b, 40 CFR 60 Subpart BB and 401 KAR 59:080 instead. Exempt due to 40 CFR 60.40b(f).
40 CFR 60.40b (NSPS Subpart Db), *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (greater than 100 mmBTU), constructed after June 19, 1984*, because it is subject to 40 CFR 60 Subpart BB and 401 KAR 59:080 instead. Exempt due to 40 CFR 60.40b(f).
40 CFR 60.40c (NSPS Subpart Dc), *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, because it is subject to 40 CFR 60 Subpart BB. (Exempt due to 40 CFR 60.40c(a) since it is a secondary steam generation unit).

1. Operating Limitations:

a. Pursuant to 401 KAR 51:017, backup fuels shall only include natural gas and fuel oil with
a sulfur content not to exceed 0.50%.
b. Pursuant to 401 KAR 51:017, Section 9, emission rates specified under **Item 2** and the air

pollution control equipment to control these emissions, **Item 7**, represents best available control technology (BACT); hence, all equipment, including control equipment, associated with the emission unit shall be operated and monitored, see **Item 4**, to maintain emissions below the specified BACT emission rate.

c. Pursuant to 40 CFR 63 Subpart MM, emission rates specified under **Item 2** and the air pollution control equipment to control these emissions, **Item 7**, represents maximum achievable control technology (MACT); hence, all equipment, including control equipment, associated with the emission unit shall be operated and monitored, see **Item 4**, to maintain emissions below the specified MACT emission rate.

Compliance Demonstration Method:

Refer to **Items 4 and 5** under this emission point.

2. Emission Limitations:

a. Pursuant to 401 KAR 51:017, PM emissions shall not exceed 0.025 gr/dscf corrected to 8% oxygen, and 106.5 tons/yr. PM_{10} emissions shall not exceed 18 lbs. /hr and 78.8 tons/year.

b. Pursuant to 40 CFR 60.282(a)(1)(ii), visible emissions shall not equal or exceed an opacity reading of thirty five percent on a 6 minute average.

c. Pursuant to 40 CFR 60.283(a)(2), TRS emissions shall not exceed a concentration of 5 ppm by volume on a dry basis corrected to eight percent oxygen on a 12-hour average.

d. Pursuant to 401 KAR 51:017, SO_2 emissions shall not exceed a concentration of 200 ppm by volume on a dry basis corrected to eight percent oxygen.

e. Pursuant to 401 KAR 51:017, NO_x emissions shall not exceed a concentration of 150 ppm by volume on a dry basis corrected to eight percent oxygen.

f Pursuant to 40 CFR 63.864, corrective actions shall be taken if the average of ten consecutive 6-min opacity measurements exceeds twenty percent. Opacity measurements shall not exceed 35% for more than 6% of the quarterly operating time.

Compliance Demonstration Method:

Note: The conversion equations:
ug/m^3 (pollutant concentration) = [ppm] * [pollutant molecular weight]/[0.02445]
ppm (pollutant concentration) = [ug/m^3] * 0.02445/[pollutant molecular weight]
lb/hr (pollutant emission rate) = 2.2527 x 10e-9 * [ug/m^3] * [stack gas flowrate (dry std ft^3/min)]
lb/hr (pollutant emission rate) = [ton/yr(TPY)] * [2000 lbs/ton]/[operating hours/yr]
lb/hr (pollutant emission rate) = [pollutant emission rate (lbs/yr)]/[operating hours/yr]

a. For PM_{10} Annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 3

Recovery Boiler Production)] x PM_{10} emission factor observed during last emission test (lbs/ton BLS).

b. For PM_{10} Hourly emission limits:
Hourly Emission Rate = [(Monthly tons BLS from No. 3 Recovery Boiler Production)/(Operation Hours/month)] x PM_{10} emission factor (lbs/tons) observed during last emission test

c. For NO_x Annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 3 Recovery Boiler Production)] x [NO_x emission factor observed during last emission test (lbs./ton BLS)].

d. For SO_2 Annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 3 Recovery Boiler Production)] x [SO_2 emission factor observed during last emission test (lbs./ton BLS)].

e. For TRS Annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 3 Recovery Boiler Production)] x [TRS emission factor observed during last emission test (lbs./ton BLS)].

f. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and record keeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Recordkeeping Requirements** during all periods.

h. Compliance with the TRS limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and record keeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Recordkeeping Requirements** during all periods.

i. Compliance with the SO_2 limits shall be demonstrated through the monitoring of black liquor percent solids or other parameters which have been demonstrated to correlate to SO_2 emissions. The permittee shall perform the monitoring and record keeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Recordkeeping Requirements** during all periods.

j. Compliance with the NO_x limits shall be demonstrated through the monitoring of boiler oxygen content or other parameters which have been demonstrated to correlate to NO_x emissions. The permittee shall perform the monitoring and record keeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Recordkeeping Requirements** during all periods.

3. <u>Testing Requirements</u>:

a. Performance testing for HAPs/PM shall be performed to meet the requirements and methods specified in 40 CFR 63.865, Performance test requirements and test methods.

b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR

50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 60.284 (a) and (a)(1), the permittee shall install, calibrate, maintain, and operate a continuous monitoring system(CMS) to monitor and record the opacity of the gases discharged from the recovery furnace.
b. Pursuant to 40 CFR 60.284 (a)(2), the permittee shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a dry basis in the gases discharged into the recovery furnace.
c. Excluding the startup and shutdown periods, if any 12-hour average TRS value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and/or the CMS system and make any necessary repairs or take corrective actions as soon as practicable.
d. Pursuant to State Regulation 401 KAR 51:017, the permittee shall monitor and maintain records of the black liquor processed and percent solids and average boiler percent oxygen on a 24-hr basis.
e. The permittee shall monitor and maintain records of the following information:
    1. The total monthly (each calendar month) production of No. 3 Recovery Boiler.
    2. The hours per month of operation for the unit.
    3. During periods of normal operation of the continuous monitoring system, no additional compliance demonstration is necessary. If the No. 3 Recovery Boiler is in operation during any period of malfunction of the CMS, the permittee shall once per calendar day survey each emissions unit associated with emission point B-304 for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9 immediately. A log documenting the observations shall be maintained. If a Method 9 cannot be performed, the reason for not performing the test shall be documented.

5. Specific Recordkeeping Requirements:

a. The facility shall maintain records of the amount of each type of fuel, and fuel analysis of fuel oil burned in the boiler.
b. Records in the daily/weekly/monthly log shall include but are not limited to the following:
    i. Whether any air emissions were visible from the unit.
    ii. Whether the visible emissions were normal for the unit.
    iii. The cause of any abnormal emissions and any corrective action taken.
c. The permittee shall also maintain records of the following information:
    1. The total monthly (each calendar month) fuel usage in this Boiler.
    2. The hours per month and months per year of operation for the unit.
    3. Refer to the above monitoring requirements.
    4. Respective monthly production rates.
d. In addition to all monitoring records specified under Subsection 4. **Specific Monitoring Requirements**, and pursuant to 40 CFR 60.284 (d)(1)(ii), all 6 minute average opacities

equal to or exceeding 35 % shall be recorded.

e. Pursuant to 40 CFR 60.284 (d)(1)(i), the facility will record on a daily basis 12 hour TRS and oxygen concentrations for the two consecutive periods of each operating day (as described in 40 CFR 60.284(c)).
f. Summarize total production of black liquor solids monthly [401 KAR 51:017 and 40 CFR63.866(c)(1)], and
g. Calcualte and record the annual PM/PM_{10} emissions.
h. Maintain records of fuel type burned and duration when not combusting primary fuel (BLS).
i. The permittee shall keep on file and make available for inspection the emission factors based on the most recent stack test.
j. The permittee shall maintain plans and processing rates as specified under 40 CFR 63.866.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 60.284 (d)(1)(ii), all 6 minute average opacities greater than or equal to 35% must be reported on a semi-annual basis.
b. Pursuant to 40 CFR 60.284 (d)(1)(i), All 12-hour average TRS concentrations above 5 ppm by volume must be reported on a semiannual basis.
c. The permittee shall submit reports in accordance with 40 CFR 63.867, Reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. The electrostatic precipitator shall be operated to maintain compliance with the permitted emission limitations in accordance with the manufacturer's specifications and/or standard operating procedures.
b. Records regarding the maintenance of the control equipment shall be maintained.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 28 – BPM Smelt Tank No. 3:

EIS No.	Emission Point	Description
018	18 (B-435)	Smelt Tank No. 3

Installed: **March 1987**
Maximum Rated Capacity: **383,250 tons Black Liquor Solids per year**
Description/purpose: **To dissolve molten inorganics recovered in the Recovery Furnace in water to form Green Liquor.**
Control Equipment: **Scrubber**

APPLICABLE REGULATIONS:

401 KAR 59:080, *New Kraft (sulfate) pulp mills constructed after April 9, 1972*
401 KAR 63:002 (40 CFR 63 Subpart MM), *National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills*
401 KAR 60:005 (40 CFR 60 Subpart BB), *Standards of Performance for Kraft Pulp Mills*
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

401 KAR 60:005 (40 CFR 60 Subpart Kb), *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*, is not applicable since the storage vessel(s) associated with the Emission Unit 28 are exempt because the size of the tank(s) is less than 40 cubic meters, or the tank does not contain a VOL

1. Operating Limitations:

a. Pursuant to 401 KAR 51:017, fresh water or caustic solution shall be used as the scrubbing liquid in the venturi scrubber for the No. 3 Smelt Dissolving Tank.
b. Pursuant to 401 KAR 51:017, Section 9, emission rates specified under **Item 2** and the air pollution control equipment to control these emissions, **Item 7**, represents best available control technology (BACT); hence, all equipment, including control equipment, associated with the emission unit shall be operated and monitored, see **Item 4**, to maintain emissions below the specified BACT emission rate.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Compliance Demonstration Method:

The scrubber shall be maintained and operated as specified by **Item 7** of this emission point.

2. Emission Limitations:

a. Pursuant to 401 KAR 51:017, PM emissions shall not exceed 0.12 lbs./ton of black liquor solids (dry weight) and 23 tons/yr. PM_{10} emissions shall not exceed 4.7 lbs./hr and 20.6 tons/yr.
b. Pursuant to 401 KAR 51:017, TRS emissions shall not exceed 0.33 lbs./ton of black liquor solids (dry weight) and non-sulfur bearing scrubber water.
c. Pursuant to 401 KAR 51:017, SO_2 emissions shall not exceed 0.1 lbs./ton of black liquor solids (dry weight).
d. Pursuant to 40 CFR 63.862(a)(1)(i)(B), the owner or operator of each existing kraft smelt dissolving tank must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.10 kg/Mg (0.20 lbs./ton) of black liquor solids fired or meet the requirements of 40 CFR 63.865(a)(1).
e. Pursuant to 40 CFR 63.864, after the effective date, a corrective action shall be implemented whenever a 3-hr average parameter value is outside the established range value.

Compliance Demonstration Method:

a. For PM/PM_{10} Annual emission limits:
Annual Emission Rate = Sum (any consecutive 12 month) production rate (tons BLS from No. 3 Recovery Boiler Production) x PM/PM_{10} emission factor observed during last emission test (lbs./ton BLS)]
b. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and record keeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Record Keeping Requirements** during all periods.
c. Compliance with the TRS limits shall be demonstrated through the monitoring of scrubber operating conditions, or other parameters which have been demonstrated to correlate to TRS emissions: The permittee shall perform the monitoring and record keeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Record Keeping Requirements** during all periods.
d. Compliance with the SO_2 limits shall be demonstrated through the monitoring of scrubber operating conditions, or other parameters which have been demonstrated to correlate to SO_2 emissions. The permittee shall perform the monitoring and record keeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Record Keeping Requirements** during all periods.

3. Testing Requirements:

a. Performance testing for HAPs/PM shall be performed by the methods specified in 40 CFR 63.865, Performance test requirements and test methods.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 60.284(b)(2), instruments for monitoring and recording scrubber pressure drop and scrubber liquid pressure must be maintained and operated.
b. Pursuant to 40 CFR 63.864(a)(2), the owner or operator of each kraft smelt dissolving tank equipped with a wet scrubber must install, calibrate, maintain, and operate a continuous monitoring system that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period using the procedures in 40 CFR 63.8(c).
c. Pursuant to 40 CFR 63.864(e)(10)(i), the monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to be accurate to within a gauge pressure of 500 pascals (2 inches of water gage pressure).
d. Pursuant to 40 CFR 63.864(a)(2)(ii), the device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within 5 percent of the design scrubbing liquid flow rate.

5. Specific Recordkeeping Requirements:

For compliance demonstration purposes, the permittee shall:
a. Maintain operational records on the Smelt Tank No. 3 Scrubber System operating parameters listed in accordance to Subsection 7 **- Specific Control Equipment Operating Conditions** below.
b. Summarize total Black Liquor Solids (BLS) processed through the No. 3 Recovery Boiler monthly, and
c. From this, estimate and record the PM/PM_{10} emissions annually.
d. The permittee shall keep on file and make available for inspection the emission factors based on the most recent stack test.
e. The permittee shall maintain records as specified at 40 CFR 63.866, Recordkeeping requirements.

6. Specific Reporting Requirements:

Reports shall be submitted in accordance with 40 CFR 63.867.

7. Specific Control Equipment Operating Conditions:

The permittee shall monitor the following operating parameters at the frequency indicated for this scrubber.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Operating Parameters for the Smelt Tank No. 3 Scrubber

Parameter	Monitoring Frequency	Acceptable Range
Scrubber Liquid Flow Rate	Continuous	Observe and Record
Scrubber Liquid pressure	Continuous	Observe and Record
Scrubber Pressure Drop	Continuous	> 1.0 inch H_20

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 29 – BPM Recovery Boiler/Furnace No. 4:

EIS No.	Emission Point	Description
028	289 (B-440)	Recovery Boiler No. 4

Installed: **October 1997**
Primary Fuel: **Black Liquor Solids (BLS)**
Secondary Fuel: **Natural Gas, Propane or Fuel Oil (with <0.50% sulfur content)**
Maximum Rated Capacity: **584,000 tons Black Liquor Solids per year**
Description/purpose: **To combust the organic portion of the Black Liquor for steam generation and recovery of the inorganic portion.**

Control Equipment: **Electrostatic Precipitator**

APPLICABLE REGULATIONS:

401 KAR 59:080, *New Kraft (sulfate) pulp mills constructed after April 9, 1972*
401 KAR 63:002 (40 CFR 63 Subpart MM), *National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills*
401 KAR 60:005 (40 CFR 60 Subpart BB), *Standards of Performance for Kraft Pulp Mills*
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 63:021, Section 1, *Existing sources emitting toxic air pollutant (formaldehyde)*.

REGULATIONS NOT APPLICABLE:

401 KAR 60:005, *40 CFR Part 60 standards of performance for new stationary sources* incorporates the regulations listed below:
40 CFR 60.40 (NSPS Subpart D), *Standards of Performance for Fossil- Fuel Fired Steam Generators over 250 mmBTU constructed after August 17, 1971*, because it is subject to 40 CFR 60.40b, 40 CFR 60 Subpart BB and 401 KAR 59:080 instead. Exempt due to 40 CFR 60.40b(f).
40 CFR 60.40b (NSPS Subpart Db), *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (greater than 100 mmBTU), constructed after June 19, 1984*, because it is subject to 40 CFR 60 Subpart BB and 401 KAR 59:080 instead. Exempt due to 40 CFR 60.40b(f).
40 CFR 60.40c (NSPS Subpart Dc), *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, because it is subject to 40 CFR 60 Subpart BB. (Exempt due to 40 CFR 60.40c(a) since it is a secondary steam generation unit).

1. Operating Limitations:

a. Pursuant 401 KAR 51:017, backup fuels shall only be natural gas, propane, or fuel oil with sulfur content of less than 0.50%. Use of the above fuels shall not exceed 10% of the total potential heat input in any consecutive 12 months. The fuel usage shall be

monitored on a monthly basis and shall be used to calculate the annual percentage for any 12-month period.

b. Pursuant to 401 KAR 51:017, Section 9, emission rates specified under **Item 2** and the air pollution control equipment to control these emissions, **Item 7**, represents best available control technology (BACT); hence, all equipment, including control equipment, associated with the emission unit shall be operated and monitored, see **Item 4**, to maintain emissions below the specified BACT emission rate.

Compliance Demonstration Method:

Refer to **Items 4 and 5** under this emission point.

2. <u>Emission</u> <u>Limitations</u>:

a. Pursuant to 40 CFR 63.862(a)(i)(A) and 401 KAR 51:017 and 40 CFR 63.862(a)(1)(i)(a), PM/PM_{10} emissions shall not exceed 0.044 gr/dscf @ 8% oxygen and 132.61 TPY.
b. Pursuant to 401 KAR 51:017, CO emissions shall not exceed 200 ppm @ 8% oxygen, and 693.63 TPY.
c. Pursuant to 401 KAR 51:017, NOx emissions shall not exceed 110 ppm @ 8% oxygen, and 577.95 TPY.
d. Pursuant to 40 CFR 60 Subpart BB, visible emissions shall not equal or exceed an opacity reading of 35% (6 minute average).
e. Pursuant to 401 KAR 51:017, SO_2 emissions shall not exceed 100 ppm @ 8% oxygen, and 731.01 TPY.
f. Pursuant to 401 KAR 51:017, TRS shall not exceed 5 ppm @ 8% oxygen (12-hour average), and 19.42 TPY.
g. Pursuant to 401 KAR 51:017, VOC emissions measured as methane shall not exceed 20 ppm @ 8% oxygen, and 100.51 TPY
h Pursuant to 40 CFR 63.864, a corrective action shall be implemented if the average of ten consecutive 6-min opacity measurements exceeds twenty percent. The opacity shall not be greater the 35% for more than 6% of the quarterly operating period.

Compliance Demonstration Method:

Note: The conversion equations:
ug/m^3 (pollutant concentration) = [ppm] * [pollutant molecular weight]/[0.02445]
lb(s)/hr (pollutant emission rate) = 2.2527 x 10e-9 * [ug/m^3] * [stack gas flowrate (dry std ft^3/min)]
ppm (pollutant concentration) = [ug/m^3] * 0.02445/[pollutant molecular weight]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

a. For PM/PM $_{10}$ Annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 4 Recovery Boiler Production)] x [PM//PM $_{10}$ emission factor observed during last emission
test (lbs./ton BLS)].

b. For CO Annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 4 Recovery Boiler Production)] x [CO emission factor observed during last emission test (lb/ton BLS)].

c. For NO_x Annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 4 Recovery Boiler Production)] x [NO_x emission factor observed during last emission test (lbs./ton BLS)].

d. For SO_2 Annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 4 Recovery Boiler Production)] x [SO_2 emission factor observed during last emission test (lbs./ton BLS)].

e. For TRS Annual emission limits:
Monthly Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 4 Recovery Boiler Production)] x [TRS emission factor observed during last emission test (lbs./ton BLS)].

f. For VOC Annaul emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) (tons BLS from No. 4 Recovery Boiler Production)] x [VOC emission factor observed during last emission test (lbs./ton BLS)].

h. The permittee shall comply with the requirements of **Sections B.4.** and **5.** under this emission point.

3. Testing Requirements:

a. Performance testing for HAPs/PM shall be performed to meet the requirements and using the methods specified in 40 CFR 63.865, Performance test requirements and test methods.

b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8, performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 60.284 (a) and (a)(1), the permittee shall install, calibrate, maintain, and operate a continuous monitoring system(CMS) to monitor and record the opacity of the gases discharged from the recovery furnace.

b. Pursuant to 40 CFR 60.284 (a)(2), the permittee shall install, calibrate, maintain, and operate a continuous monitoring system to monitor and record the concentration of TRS emissions on a dry basis and the percent of oxygen by volume on a

dry basis in the gases discharged from the recovery furnace.

c. Excluding the startup and shutdown periods, if any 12-hour average TRS value exceeds the standard, the permittee shall, as appropriate, initiate investigation of the cause of the exceedance and/or the CMS system and make any necessary repairs or take corrective actions as soon as practicable.
d. Pursuant to State Regulation 401 KAR 51:017, the permittee shall monitor and maintain records of the black liquor processed and percent solids and average boiler percent oxygen on a 24-hr basis.
e. The permittee shall monitor and maintain records of the following information:
    1. The total monthly (each calendar month) tons of BLS consumed at No. 4 Recovery Boiler.
    2. The hours per month of operation for the unit.
    3. During periods of normal operation of the continuous monitoring system, no additional compliance demonstration is necessary. If the No. 4 Recovery Boiler is in operation during any period of malfunction of the CMS, the permittee shall once per calendar day survey each emissions unit associated with emission point B-440 for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9 immediately. If a Method 9 cannot be performed, the reason for not performing the test shall be documented.
f. To comply with HAP emissions under 40 CFR 63.864(a)(1), the owner or operator of each affected kraft recovery furnace equipped with an ESP must install, calibrate, maintain, and operate a continuous opacity monitoring system that can be used to determine opacity at least once every successive 10-second period and calculate and record each successive 6-minute average opacity.

5. <u>Specific</u> <u>Recordkeeping</u> <u>Requirements</u>:

a. The facility shall maintain records of the amount of fuel, and fuel analysis of the natural gas and fuel oil burned in the boiler.
b. Records in the daily/weekly/monthly log shall include but not limited to the following:
    i. Whether any air emissions were visible from the unit.
    ii. Whether the visible emissions were normal for the unit.
    iii. The cause of any abnormal emissions and any corrective action taken.
c. The permittee shall also maintain records of the following information:
    1. The total monthly (each calendar month) fuel usage in this Package Boiler.
    2. The hours per month and months per year of operation for the unit.
    3. Refer to the above monitoring requirements.
    4. Respective monthly pollutant emission rates
d. In addition to all monitoring records specified under Subsection 4 **<u>Specific</u> <u>Monitoring Requirements</u>**, and pursuant to 40 CFR 60.284 (d)(1)(ii), all 6 minute average opacities equal to or exceeding 35 % shall be recorded.
e. Pursuant to 40 CFR 60.284 (d)(1)(i), the facility will record on a daily basis 12 hour TRS and oxygen concentrations for the two consecutive periods of each operating day (as described in 40 CFR 60.284(c)).
f. Summarize total consumption of black liquor solids (BLS) monthly, and
h. From this, estimate and record the $PM_{10,}$ CO, SO2, NOx, TRS and VOC emissions

annually and monthly.

i. Maintain records of fuel type burned and duration when not combusting primary fuel (BLS).
j. The permittee shall keep on file and make available for inspection the emission factors based on the most recent stack test.
k. The permittee shall maintain plans and processing rates as specified under 40 CFR 63.866.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 60.284 (d)(1)(ii), all 6 minute average opacities greater than or equal to 35% must be reported on a quarterly basis.
b. Pursuant to 40 CFR 60.284 (d)(1)(i), all 12-hour average TRS concentrations above 5 ppm by volume must be reported on a quarterly basis.
c. The permittee shall submit reports in accordance with 40 CFR 63.867, Reporting requirements.

7. Specific Control Equipment Operating Conditions:

a. The electrostatic precipitator shall be operated to maintain compliance with the permitted emission limitations in accordance with the manufacturer's specifications and/or standard operating procedures.
b. Records regarding the maintenance of the control equipment shall be maintained.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS
Unit 30 – BPM Smelt Tank No. 4:

EIS No.	Emission Point	Description
029	29 (B-445)	Smelt Tank No. 4

Installed: **October 1997**
Maximum Rated Capacity: **584,000 Tons of Black Liquor Solids per year**
Description/purpose: **To dissolve molten inorganics recovered in the Recovery Furnace into water (green liquor).**
Control Equipment: **Scrubber**

APPLICABLE REGULATIONS:

401 KAR 59:080, *New Kraft (sulfate) pulp mills constructed after April 9, 1972*
401 KAR 63:002 (40 CFR 63 Subpart MM), *National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills*
401 KAR 60:005 (40 CFR 60 Subpart BB), *Standards of Performance for Kraft Pulp Mills*
401 KAR 51:017, *Prevention of significant deterioration of air quality*
401 KAR 63:021, Section 1, *Existing sources emitting toxic air pollutant (formaldehyde)*.

REGULATIONS NOT APPLICABLE:

401 KAR 60:005, (40 CFR 60 Subpart Kb), *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984*, is not applicable since the storage vessel(s) associated with the Emission Unit 28 are exempt because the size of the tank(s) is less than 40 cubic meters, or the tank does not contain a VOL

1. Operating Limitations:

Pursuant to 401 KAR 51:017, Section 9, emission rates specified under **Item 2** and the air pollution control equipment to control these emissions, **Item 7**, represents best available control technology (BACT); hence, all equipment, including control equipment, associated with the emission unit shall be operated and monitored, see **Item 4**, to maintain emissions below the specified BACT emission rate.

Compliance Demonstration Method:

Refer to **Items 2**, **4**, and **7** of this emission point.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

2. Emission Limitations:

a. Pursuant to 401 KAR 51:017 and 40 CFR 63.862(a)(1)(i)(B), PM emissions shall not exceed 0.20 lbs./ton of BLS, and PM and PM10 of 29.57 TPY.
b. Pursuant to 401 KAR 51:017, SO2 emissions shall not exceed 0.1 lbs./ton of BLS, and 24.64 TPY.
c. Pursuant to 401 KAR 51:017, TRS emissions shall not exceed 0.033 lbs./ton of BLS, and 8.13 TPY.
d. Pursuant to 401 KAR 51:017, VOC emissions measured as methane shall not exceed 0.16 lbs./ton of BLS, and 39.42 TPY.
e. Pursuant to 40 CFR 63.864, after the effective date, a corrective action shall be implemented whenever a average 3-hr average parameter value is outside the established range value.

Compliance Demonstration Method:

Annual emission limits:

a. For PM_{10} annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (tons BLS from each Recovery Boiler Production) x PM_{10} emission factor observed during last emission test (lbs./ton BLS)]
b. For SO_2 annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (tons BLS from No. 4 Recovery Boiler Production) x SO_2 emission factor observed during last emission test (lbs./ton BLS)]
c. For TRS annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (tons BLS from No. 4 Recovery Boiler Production) x TRS emission factor observed during last emission test (lbs./ton BLS)]
d. For VOC annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (tons BLS from No. 4 Recovery Boiler Production) x VOC emission factor observed during last emission test (lbs./ton BLS)]
e. Comply with the requirements of Section B.4. and 5 under this emission point.

3. Testing Requirements:

a. Performance testing for HAPs/PM shall be performed to meet the requirements and using the methods specified at 40 CFR 63.865, Performance test requirements and test methods.
b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8, performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 60.284(b)(2), instruments for monitoring and recording scrubber pressure drop and scrubber liquid pressure must be maintained and operated.
b. Pursuant to 40 CFR 63.864(a)(2), the owner or operator of each kraft smelt dissolving tank equipped with a wet scrubber must install, calibrate, maintain, and operate a continuous monitoring system that can be used to determine and record the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period using the procedures in 40 CFR 63.8(c).
c. Pursuant to 40 CFR 63.864(a)(2)(i), the monitoring device used for the continuous measurement of the pressure drop of the gas stream across the scrubber must be certified by the manufacturer to be accurate to within a gage pressure of 500 pascals (2 inches of water gage pressure).
d. Pursuant to 40 CFR 63.864(a)(2)(ii), the device used for continuous measurement of the scrubbing liquid flow rate must be certified by the manufacturer to be accurate within 5 percent of the design scrubbing liquid flow rate.

5. Specific Recordkeeping Requirements:

For compliance demonstration purposes, the permittee shall:
a. See the specific monitoring requirements, above.
b. Maintain log sheets on the Smelt Tank No. 4 Scrubber System operating parameters listed in Subsection 7 - **Specific Control Equipment Operating Conditions** below.
c. Summarize total production rates of processes venting to the Smelt Tank No. 4 Scrubber System monthly, and
d. From this, estimate and record the $PM_{10,}$ CO, SO2, NOx, TRS and VOC emissions annually and monthly.
e. The permittee shall maintain scrubber parameter records as specified at 40 CFR 63.866, Recordkeeping requirements.

6. Specific Reporting Requirements:

Reports shall be submitted in accordance with 40 CFR 63.867.

7. Specific Control Equipment Operating Conditions:

Permittee shall monitor the following operating parameters at the frequency indicated for this scrubber.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Operating Parameters for the Smelt Tank No. 4 Scrubber

Parameter	Monitoring Frequency	Acceptable Range
Scrubber Liquid Flow Rate	Continuous	Observe and Record
Scrubber Liquid pressure	Continuous	Observe and Record
Scrubber Pressure Drop	Continuous	> 1.0 inch H_20

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 31 – BPM Causticizing Tanks:

EIS No.	Emission Point	Description
023	31 (B-501, B-502, B-503	3 Causticizing Tanks
	B-504, B-505,	2 Lime Mud Washers
	B-506, B508	2 Lime Mud Storages
	B-509)	Mud Mix Tank

Installed: **November 1997**
Maximum Rated Capacity: **161,695 tons CaO per year**
Description/purpose: **To convert inorganic material in green liquor to white liquor (pulping chemical)**

APPLICABLE REGULATIONS: None

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 32 – BPM Slaker No. 2:

EIS No.	Emission Point	Description
021	32 (B-520)	Slaker No. 2

Installed: **July 1988**
Maximum Rated Capacity: **45,000 gallons per hour green liquor or 11 tons/hr CaO**
Description/purpose: **To convert inorganic material in green liquor to white liquor (pulping chemical)**

APPLICABLE REGULATIONS:
401 KAR 59:010, *New process operations*
401 KAR 63:020, *Potentially hazardous matter or toxic substances*
401 KAR 63:021, *Existing sources emitting toxic air pollutants*

REGULATIONS NOT APPLICABLE:
NA

1. Operating Limitations:

None

2. Emission Limitations:

a. Pursuant to 401 KAR 59:010, Appendix A, the emissions of particulate matter shall not exceed the allowable rate limit as calculated by the following equations using the process weight rate (in units of tons/hr).

For process rates up to 1,000 lbs/hr: $E = 2.34$
For process rates up to 60,000 lbs/hr: $E = 3.59\ P^{0.62}$
For process rates in excess of 60,000 lbs/hr: $E = 17.31\ P^{0.16}$

For the equations: E = rate of emission in lb/hr and P = process weight rate in tons/hr (monthly throughput in tons/monthly hours of operation).

b. Pursuant to 401 KAR 59:010, Section 3, opacity shall not exceed 20%.

Compliance Demonstration Method:

a. For PM Hourly emission limits:
Hourly Emission Rate = [Monthly Usage Rate (tons CaO used) x PM emission factor observed during last emission test (lbs./ton CaO)/Monthly hours of operation].

b. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping**

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Requirements during all periods.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8, performance testing of criteria pollutants using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information: the total monthly (each calender month) green liquor throughput and calcium oxide usage on the No. 2 Slaker.
b. The permittee shall monitor and maintain records of the following information:
   1. The hours per month of operation for the unit(s).
   2. During periods of normal operation, no compliance demonstration under Section 2 is necessary. If the No. 2 Slaker is in operation during any period of malfunction, the permittee shall survey the stack associated with Unit 32 for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9 immediately.

5. Specific Recordkeeping Requirements:

a. The facility shall maintain records of the amount of materials processed.
b. Records in the daily/weekly/monthly log shall include but not limited to the following:
   i. Whether any air emissions were visible from the unit.
   ii. Whether the visible emissions were normal for the unit.
   iii. The cause of any abnormal emissions and any corrective action taken.
c. The permittee shall also maintain records of the following information:
   1. The hours per month and months per year of operation for the unit.
   2. Refer to the above monitoring requirements.
   3. Respective monthly pollutant emission rates

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

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Unit 33 – BPM Slaker No. 3:

EIS No.	Emission Point	Description
031	31 (B-530)	Slaker No. 3

Installed: **November 1997**
Maximum Rated Capacity: **72,000 gallons per hour green liquor or 18.5 tons/hr of CaO**
Description/purpose: **To convert inorganic material in green liquor to white liquor (pulping chemical)**

APPLICABLE REGULATIONS:
401 KAR 59:010, New *process operations*
401 KAR 63:020, *Potentially hazardous matter or toxic substances*
401 KAR 63:021, *Existing sources emitting toxic air pollutants*

REGULATIONS NOT APPLICABLE:
NA

1. **Operating Limitations:** None

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 59:010, Appendix A, the emissions of particulate matter shall not exceed the allowable rate limit as calculated by the following equations using the process weight rate (in units of tons/hr).

      For process rates up to 1,000 lbs/hr: $E = 2.34$
      For process rates up to 60,000 lbs/hr: $E = 3.59\ P^{0.62}$
      For process rates in excess of 60,000 lbs/hr: $E = 17.31\ P^{0.16}$

      For the equations: E = rate of emission in lb/hr and P = process weight rate in tons/hr (monthly throughput in tons/monthly hours of operation).

   b. Pursuant to 401 KAR 59:010, Section 3, opacity shall not exceed 20 %.

   Compliance Demonstration Method:

   a. For PM Hourly emission limits:
      Hourly Emission Rate = [Monthly Production Rate (tons CaO Production) x PM emission factor observed during last emission test (lbs./ton CaO)/Monthly hours of operation].
   b. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Recordkeeping Requirements** during all periods.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of criteria pollutants using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information: the total monthly (each calender month) green liquor throughput and calcium oxide usage on the No. 3 Slaker.
b. The permittee shall monitor and maintain records of the following information:
   1. The hours per month of operation for the unit(s).
   2. During periods of normal operation, no compliance demonstration under Section 2 is necessary. If the No. 3 Slaker is in operation during any period of malfunction, the permittee shall survey the stack associated with Unit 32 for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9 immediately.

5. Specific Recordkeeping Requirements:

a. The facility shall maintain records of the amount of materials processed.
b. Records in the daily/weekly/monthly log shall include but not limited to the following:
   i. Whether any air emissions were visible from the unit.
   ii. Whether the visible emissions were normal for the unit.
   iii. The cause of any abnormal emissions and any corrective action taken.
c. The permittee shall also maintain records of the following information:
   i. The hours per month and months per year of operation for the unit.
   ii. Refer to the above monitoring requirements.
   iii. Respective hourly/monthly pollutant emission rates

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 36 – BPM Lime Kiln No. 3:

EIS No.	Emission Point	Description
030	30 (B-630)	Lime Kiln No. 3 (Includes PCC Plant)

Installed: **November 1997**
Primary Fuel: **Petroleum Coke/Natural Gas**
Secondary Fuel: **Fuel Oil (with <0.50% sulfur content), propane**
Maximum Rated Capacity: **161,695 tons CaO per year**
Description/purpose: **To convert calcium carbonate to calcium oxide for use in the re-causticizing process and as a backup incineration device for LVHC's and SOG's.**
Control Equipment: **Electrostatic Precipitator**

APPLICABLE REGULATIONS:

401 KAR 59:080, *New Kraft (sulfate) pulp mills constructed after April 9, 1972*
401 KAR 63:002 (40 CFR 63 Subpart MM), *National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills*
401 KAR 60:005 (40 CFR 60 Subpart BB), *Standards of Performance for Kraft Pulp Mills*
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

401 KAR 61:025, *Existing kraft (sulfate) pulp mills.*
401 KAR 63:021, *Existing sources emitting toxic air pollutants*

1. Operating Limitations:

a. Pursuant to 401 KAR 51:017, alternate fuels shall include propane, and fuel oil with sulfur content of <0.50%. Heat input shall not exceed 115 mmBTU per hour.
b. Pursuant to 401 KAR 51:017, Section 9, emission rates specified under **Item 2** and the air pollution control equipment to control these emissions, **Item 7**, represents best available control technology (BACT); hence, all equipment, including control equipment, associated with the emission unit shall be operated and monitored, see **Item 4**, to maintain emissions below the specified BACT emission rate.
c. Pursuant to 40 CFR 63 Subpart S, this emission unit may serve as an alternate combustion device for the treatment of organic HAPs.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Compliance Demonstration Method:

Please refer to **Items 4 and 5** under this emission point.

2. Emission Limitations:

a. Pursuant to 401 KAR 51:017, PM/PM10 emissions shall not exceed 0.067 gr/dscf at 10% oxygen and 38.89 TPY.
b. Pursuant to 401 KAR 51:017, CO emissions shall not exceed 300 ppm @ 10% oxygen, and 243.57 TPY.
c. Pursuant to 401 KAR 51:017, NOx emissions shall not exceed 150 ppm @ 10% oxygen, and 200.07 TPY.
d. Pursuant to 401 KAR 51:017, SO2 emissions shall not exceed 73 ppm corrected to 10% oxygen, and 135.78 TPY.
e. Pursuant to 401 KAR 51:017, TRS emissions shall not exceed 8 ppm (12 hour average) corrected to 10%, and 7.89 TPY.
f. Pursuant to 401 KAR 51:017, VOC emissions measured as methane shall not exceed 75 ppm @ 10% oxygen, and 93.18 TPY.
g. Pursuant to 40 CFR 63.862(a)(1)(i)(C), the owner or operator of each existing Kraft lime kiln must ensure that the concentration of PM in the exhaust gases discharged to the atmosphere is less than or equal to 0.15 g/dscm (0.064 gr/dscf) corrected to 10 percent oxygen.
h. Pursuant to 40 CFR 63.864, corrective action shall be implemented if the average of ten consecutive 6-min opacity measurements exceeds twenty percent. Opacity measurements shall not exceed 20% for more than 6% of the quarterly operating time.

Compliance Demonstration Method:

Note: The conversion equations:

ug/m^3 (pollutant concentration) = [ppm] * [pollutant molecular weight]/[0.02445]
lb(s)/hr (pollutant emission rate) = 2.2527 x 10e-9 * [ug/m^3] * [stack gas flowrate (dry std ft^3/min)]
ppm (pollutant concentration) = [ug/m^3] * 0.02445/[pollutant molecular weight]
ug/m^3 (pollutant concentration) = 26.626x10e+9 * [lbs/hr]/[stack gas flowrate (dry std ft^3/hr)]
gr/dscf (pollutant concentration) = 3.249 x 10e-4 * [ug/m^3]

a. For PM_{10} annual emission limits:
   1. Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (Tons CaO from No. 3 Lime Kiln Production) x PM_{10} emission factor observed during last emission test (lbs./ton CaO)].
   2. PM Conc. (gr/dscf) = ([Monthly Production Rate (Tons CaO from No. 3 Lime Kiln Production) x PM emission factor observed during last emission test (lbs./ton

CaO)]/7000)/(stack gas flowrate observed during most recent emission test, dscf, corrected to 10% oxygen)

b. For CO annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (Tons CaO from No. 3 Lime Kiln Production) x CO emission factor observed during last emission test (lbs./ton CaO)].

c. For NO_x annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (Tons CaO from No. 3 Lime Kiln Production) x NO_x emission factor observed during last emission test (lbs./ton CaO)].

d. For SO_2 annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (Tons CaO from No. 3 Lime Kiln Production) x SO_2 emission factor observed during last emission test (lbs./ton CaO)].

e. For TRS annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (Tons CaO from No. 3 Lime Kiln Production) x TRS emission factor observed during last emission test (lbs./ton CaO)].

f. For VOC annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (Tons CaO from No. 3 Lime Kiln Production) x VOC emission factor observed during last emission test (lbs./ton CaO)].

3. Testing Requirements:

a. Performance testing for HAPs/PM shall be performed to meet the requirements and methods specified in 40 CFR 63.865, Performance test requirements and test methods.
b. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8, performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 60.284 (a)(2), to meet the periodic monitoring requirement for total reduced sulfur (TRS), the permittee shall use a continuous emissions monitor (CEM) to monitor the concentration of TRS emission on a dry basis and the percent of oxygen by volume on a dry basis of gases discharged. Excluding the startup and shutdown periods, if any 12 -hour average TRS value exceeds the standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and/or the CEM system and make any necessary repairs or take corrective actions as soon as practicable.
b. Pursuant to State Regulation 401 KAR 51:017, the permittee shall monitor and maintain records of the lime kiln average flame temperature and average oxygen concentration and

the average sulfur content of the petroleum coke and fuel oil as described in compliance demonstration under **Section B.2.**

c. The permittee shall monitor and maintain records of the following information:
   i. The total monthly (each calendar month) production of the No. 3 Lime Kiln.
   ii. The hours per month of operation for the unit
d. If the No. 3 Lime Kiln is in operation during any period of malfunction of the COM, the permittee shall survey the emission unit associated with Unit 36 for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9 immediately.
e. Pursuant to 40 CFR 63.864(a)(1), the owner or operator of each affected kraft lime kiln equipped with an ESP shall install, calibrate, maintain, and operate a continuous opacity monitoring system that can be used to determine opacity at least once every successive 10-second period and calculate and record each successive 6-minute average opacity.

5. Specific Recordkeeping Requirements:

a. Pursuant to 40 CFR 60.284 (c) and (d)(2), the facility will record on a daily basis 12 hour TRS and oxygen concentrations for the two consecutive periods of each operating day (as described in 40 CFR 60.284(c)).
b. The permittee shall summarize total production of CaO monthly in tons, and
c. From this, estimate and record the PM_{10}, CO, SO2, NOx, TRS, VOC, HAP emissions monthly.
d. The permittee shall maintain records of the respective fuel combusted.
e. The permittee shall maintain a record of the most current emission factors.
f. Records in the daily/weekly/monthly log shall include but not limited to the following:
   i. Whether any air emissions were visible from the unit.
   ii. Whether the visible emissions were normal for the unit.
   iii. The cause of any abnormal emissions and any corrective action taken.
g. The permittee shall also maintain records of the following information:
   i. The hours per month and months per year of operation for the unit.
   ii. Refer to the above monitoring requirements.
   iii. Respective monthly pollutant emission rates

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 63.867(c), excess HAP emissions shall be reported quarterly.
b. Pursuant to 40 CFR 63.867(c)(1), when no exceedance of parameters was occurred, the owner or operator must submit a semiannual report stating that no excess emissions occurred during the reporting period. Refer to **Section F**.
c. Pursuant to 40 CFR 60.284 (c) and (d), the periods when TRS 12 hour concentrations average above 8 ppm corrected to 10% oxygen by volume shall be reported submitted semiannually.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

7. Specific Control Equipment Operating Conditions:

a. The electrostatic precipitator shall be operated to maintain compliance with the permitted emission limitations in accordance with the manufacturer's specifications and/or standard operating procedures.
b. Records regarding the maintenance of the control equipment shall be maintained.

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Unit 37 - BPM Lime Silos:

EIS No.	Emission Point	Description
022	37 (B-650)	Lime Silos (2)

Installed: **September 1997**
Maximum Rated Capacity: **161,695 tons CaO per year**
Description/purpose: **To store lime produced by the kiln or purchased lime until it is utilized in the re-causticizing process.**

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*
401 KAR 63:020, *Potentially hazardous matter or toxic substances*

REGULATIONS NOT APPLICABLE:

NA

1. **Operating Limitations:** None

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 59:010, Appendix A, the emissions of particulate matter shall not exceed the allowable rate limit as calculated by the following equations using the process weight rate (in units of tons/hr).

      For process rates up to 1,000 lbs/hr: $E = 2.34$
      For process rates up to 60,000 lbs/hr: $E = 3.59\ P^{0.62}$
      For process rates in excess of 60,000 lbs/hr: $E = 17.31\ P^{0.16}$

      For the equations: E = rate of emission in lb/hr and P = process weight rate in tons/hr (monthly throughput in tons/monthly hours of operation).

   b. Pursuant to 401 KAR 59:010, Section 3, Opacity shall not exceed 20 %.

   Compliance Demonstration Method:

   a. For PM hourly emission limits:
      Hourly Emission Rate = [Monthly Throughput (Tons CaO) x 0.0135* (lbs./ton CaO)]/monthly hours of operation].
      * Based On Available Emission Factors from EPA, NCASI, and Equipment Manufacturer
   b. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific**

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Recordkeeping Requirements during all periods.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8, performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information:
   i. The total monthly (each calendar month) throughput of the BPM Lime Silos (tons CaO).
   ii. The hours per month of operation for the unit.
b. Once per calendar day, the permittee shall survey the stack associated with Unit 37 for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9 immediately.

5. Specific Recordkeeping Requirements:

a. Records in the daily/weekly/monthly log shall include but not limited to the following:
   i. Whether any air emissions were visible from the unit.
   ii. Whether the visible emissions were normal for the unit.
   iii. The cause of any abnormal emissions and any corrective action taken.
b. The permittee shall also maintain records of the following information:
   i. The hours per month and months per year of operation for the unit.
   ii. Refer to the above monitoring requirements.
   iii. Respective hourly/monthly pollutant emission rates

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

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Unit 38 – BPM Petroleum Coke Storage Silo:

EIS No.	Emission Point	Description
020	20 (B-660)	Coke Silo

Installed: **December 1986**
Primary Fuel: **NA**
Secondary Fuel: **NA**
Maximum Rated Capacity: **17,500 tons of coke per year**
Description/purpose: **To store petroleum coke until utilized as fuel in the Lime Kiln**

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations

REGULATIONS NOT APPLICABLE:

401 KAR 51:017, *Prevention of significant deterioration of air quality*

1. **Operating Limitations:**

   To preclude the applicability of 401 KAR 51:017, the processing rate shall not exceed 17,500 TPY.
   Note: This petroleum coke storage silo is the storage facility for the Lime Kiln (Emission Point 36(B-630)).

   Compliance Demonstration Method:

   Please refer to **Items 4 and 5** under this emission point.

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 59:010, Appendix A, the emissions of particulate matter shall not exceed the allowable rate limit as calculated by the following equations using the process weight rate (in units of tons/hr).

      For process rates up to 1,000 lbs/hr: $E = 2.34$
      For process rates up to 60,000 lbs/hr: $E = 3.59\ P^{0.62}$
      For process rates in excess of 60,000 lbs/hr: $E = 17.31\ P^{0.16}$

      For the equations: E = rate of emission in lb/hr and P = process weight rate in tons/hr (monthly throughput in tons/monthly hours of operation).

   b. Pursuant to 401 KAR 59:010 Section 3, Opacity shall not exceed 20 %.

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Compliance Demonstration Method:

a. For PM hourly emission limits:
Hourly Emission Rate = [Monthly Throughput (Tons Petroleum Coke) x 0.27* (lbs./ton Petroleum Coke]/monthly hours of operation (unloading)].
* Based On Available Emission Factors from EPA, NCASI, and Equipment Manufacturer
b. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Recordkeeping Requirements** during all periods.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information:
    i. The total monthly (each calendar month) throughput of petroleum coke.
    ii. The hours per month of operation (loading/unloading) for the unit.
b. Once per calendar day the permittee shall survey the stack associated with each Coke silo for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9 immediately.

5. Specific Recordkeeping Requirements:

a. For compliance demonstration purposes, the permittee shall:
    i. Summarize usage of BPM Petroleum Coke throughput, and
    ii. From item #1, estimate and record the particulate emissions monthly.
b. Records in the daily/weekly/monthly log shall include but not limited to the following:
    i. Whether any air emissions were visible from the unit.
    ii. Whether the visible emissions were normal for the unit.
    iii. The cause of any abnormal emissions and any corrective action taken.
c. The permittee shall also maintain records of the following information:
    i. The hours per month and months per year of operation for the unit.
    ii. Refer to the above monitoring requirements.
    iii. Respective hourly or monthly pollutant emission rates

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

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Unit 39 – BPM Green Liquor Clarifiers:

EIS No.	Emission Point	Description
025	39 (B-680, B-681)	2 Green Liquor Clarifiers

Installed: **October 1995**
Maximum Rated Capacity: **72,000 gallons per hour of green liquor**
Description/purpose: **To store and remove inert solids from the green liquor until it is utilized in the recausticizing process.**

APPLICABLE REGULATIONS: None

1. **Operating Limitations:** None
2. **Emission Limitations:** None
3. **Testing Requirements:** None
4. **Specific Monitoring Requirements:** None
5. **Specific Recordkeeping Requirements:** None
6. **Specific Reporting Requirements:** None
7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 40 – BPM NCG/SOG Incinerator:

EIS No.	Emission Point	Description
033	33(B-700)	NCG/SOG Incinerator

Installed: **November 1997**
Primary Fuel: **Compounds in HVLC's, LVHC's, SOG's and Natural Gas**
Secondary Fuel: **Propane**
Heat input: 2.04 mmBTU/hr
Maximum Rated Capacity: **659,050 air dried tons per year**
Description/purpose: **To destroy HAPs generated during the pulping and liquor recovery processes.**
Control Equipment: **Scrubber and Low NOx burner**

APPLICABLE REGULATIONS:

401 KAR 59:080, *New Kraft (sulfate) pulp mills constructed after to April 9, 1972*
401 KAR 63:002 (40 CFR 63 Subpart S), *National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry*
401 KAR 60:005 (40 CFR 60 Subpart BB), *Standards of Performance for Kraft Pulp Mills*
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

401 KAR 61:025, *Existing Kraft (sulfate) pulp mills constructed prior April 9, 1972*
401 KAR 63:021, *Existing sources emitting toxic air pollutants*

1. Operating Limitations:

a. Pursuant to 401 KAR 51:017, propane shall be an alternate fuel.
b. Pursuant to 40 CFR 63, Subpart S, the combustion temperature shall be maintained at or above 1600°F, and materials shall have a residence combustion time of at least 0.75 seconds or reduce total HAP emissions by 98% or more by weight; or reduce the total HAP concentration at the outlet of the thermal oxidizer (incinerator) to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis.
c. Pursuant to 40 CFR 63, Subpart S, the permittee shall monitor and maintain records for a Leak Detection and Repair Program on any closed-vent system.
d. Pursuant to 40 CFR 63, Subpart S, the permittee shall collect and treat any condensate to meet requirements.
e. Pursuant to 40 CFR 60, Subpart BB, the combustion temperature shall be maintained at or above 1200°F, and materials shall have a residence combustion time for at least 0.5 seconds.
f. Pursuant to 401 KAR 51:017, Section 9, emission rates specified under **Item 2** and the air pollution control equipment to control these emissions, **Item 7**, represents best available

control technology (BACT); hence, all equipment, including control equipment, associated with the emission unit shall be operated and monitored, see **Item 4**, to maintain emissions below the specified BACT emission rate.

Compliance Demonstration Method:

Please refer to **Items 4 and 5** under this emission point.

2. Emission Limitations:

a. Pursuant to 401 KAR 51:017, CO emissions shall not exceed 12.6 lbs./hr and 55.19 TPY.
b. Pursuant to 401 KAR 51:017, NOx emissions shall not exceed 19.1 lbs./hr and 83.8 TPY.
c. Pursuant to 401 KAR 51:017, PM and PM10 emissions shall not exceed 56.1 and 56.1 TPY, respectively, or 12.8 lbs./hr, each.
d. Pursuant to 401 KAR 51:017, SO2 emissions shall not exceed 14.42 TPY, or 3.3 lbs./hr.
e. Pursuant to 401 KAR 51:017, VOC emissions calculated as methane shall not exceed 50 ppm corrected to 8% oxygen and 12.57 TPY.
f. Pursuant to 401 KAR 51:017, emissions of Total Reduced Sulfur (TRS) shall not exceed 0.92 TPY.

Compliance Demonstration Method:

a. For PM/PM_{10} annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (Total Air-Dried Tons Pulp (ADTP) Produced) x PM/PM_{10} emission factor observed during last emission test (lbs./ADTP)].
b. For CO annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (ADTP Produced) x CO emission factor observed during last emission test (lbs./ADTP)].
c. For NO_x annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (ADTP Produced) x NO_x emission factor observed during last emission test (lbs./ADTP)].
d. For SO_2 annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (ADTP Produced) x SO_2 emission factor observed during last emission test (lbs./ADTP)].
e. For TRS annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (ADTP Produced) x TRS emission factor observed during last emission test (lbs./ADTP)].
f. For VOC annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (ADTP Produced) x VOC emission factor observed during last emission test (lbs./ADTP)].

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g. The permittee shall perform the monitoring and record keeping requirements listed under Subsection **4- Specific Monitoring Requirements, and** Subsection **5 – Specific Record Keeping Requirements** during all periods. The following parameters must be maintained within the range during which emission factors were determined during the last emission tests:
    1. For SO2: Scrubber liquid flow and pH, or other parameters that have been demonstrated to correlate to SO2 emissions.
    2. For NOx, VOC, and CO: Incinerator temperature and SOG flow levels, or other parameters that have been demonstrated to correlate to NOx, VOC, and/or CO emissions.

3. Testing Requirements:

a. Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8, performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.
b. Performance testing for PM/PM10, if required by the Division, shall be conducted using Method 5B.

4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 63.453 and 63.453(b) and 40 CFR 60.284(b)(1), a monitoring device that measures and records the temperature at the point of the incineration of the gases described in (b)(1) must be maintained and operated or the permittee must prove compliance with Subpart S by monitoring appropriate process parameters.
b. Pursuant to State Regulation 401 KAR 51:017, the permittee shall monitor and maintain records of the incinerator average temperature on a 24-hr basis.
c. Pursuant to 40 CFR 63.453, the permittee shall implement an acceptable Leak Detection and Repair Program (LDAR) for each enclosure and closed-vent system.
d. The permittee shall monitor and maintain records of the following information:
    1. The total monthly (each calendar month) production of Air-Dried Tons Pulp.
    2. The hours per month of operation for the incinerator.
    3. If the NCG/SOG Incinerator is in operation during any period of malfunction, the permittee shall survey each emission point associated with the NCG/SOG Incinerator for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9.

5. Specific Recordkeeping Requirements:

a. Pursuant to 40 CFR 60.284 (d) (3) (ii), any 5-minute period where the combustion temperature is less than 1200°F must be recorded.
b. Pursuant to 40 CFR 63.443, record all periods when none of the following control options are demonstrated: 1) emissions are captured and incinerated with a combustion temperature of at least 1600°F for 0.75 seconds; or 2) total HAP emissions are reduced

by
98% or more by weight; or 3) the total HAP concentration at the outlet of the thermal

oxidizer (incinerator) are 20 parts per million or less by volume, corrected to 10 % oxygen.

c. Pursuant to 40 CFR 63.443, record downtime on the control system of greater than four percent for HVLC's and one percent for LVHC's and SOG's excluding startup, shutdown and malfunction.
d. Pursuant to 40 CFR 63.443 and 63.454, record all required inspections under the LDAR program.
e. Summarize total production of Air-Dried Tons Unbleached Pulp (ADTP) monthly, and
f. From this, estimate and record the $PM_{10,}$ CO, SO2, NOx, TRS and VOC emissions monthly.
h. During any onsite visit, specific records (monthly production and estimated emissions) for this area shall be made available for inspection at the request of the Regional inspector.
i. Maintain records, including dates and time duration, when the NCG/SOG Incinerator is operating on the fuel propane.
j. See the specific monitoring requirements, above.

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 60.284 (d), all periods in excess of 5 minutes and their duration during which the combustion temperature is less than 1200°F shall be reported semiannually.
b. Pursuant to 40 CFR 63 Subpart S, report all periods when none of the following control options are demonstrated: 1) emissions are captured and incinerated by the NCG/SOG Incinerator at or above at least 1600°F for 0.75 seconds; or 2) total HAP emissions are reduced by 98% or more by weight; or 3) the total HAP concentration at the outlet of the thermal oxidizer (incinerator) are 20 parts per million or less by volume, corrected to 10 % oxygen on a dry basis.
c. Pursuant to 40 CFR 63 Subpart S, report downtime on the control system of greater than four percent for HVLC's and one percent for LVHC's and SOG's excluding startup, shutdown and malfunction on a semiannual basis.
d. Pursuant to 40 CFR 63.7(g), the permittee shall report the results of the performance test before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard or as approved otherwise.

7. Specific Control Equipment Operating Conditions:

The permittee shall monitor the following operating parameters at the frequency indicated for this scrubber.

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Operating Parameters for the NCG/SOG Incinerator Scrubber

Parameter	Monitoring Frequency	Acceptable Range
Scrubbing Liquid Flow Rate	Check Once per Shift	> 250 gpm
Scrubber Liquid pH	Check Once per Shift	> 7.5 pH
Scrubber Supply Pressure	Check Once per Shift	Observe and record*
Incinerator Temperature	Check Once per Shift	Observe and record*
SOG Flow Levels	Check Once per Shift	Observe and record*

* Acceptable ranges should be established during stack testing and shall be reported to the Division.

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Unit 41 – BPM Processwater Treatment:

EIS No.	Emission Point	Description
026	41 (B-800)	Process water Treatment

Installed: **April 1969**
Maximum Rated Capacity: **25 million gallons per day**
Description/purpose: **To biologically treat contaminants in spent process water prior to release into the Ohio River.**

APPLICABLE REGULATIONS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

REGULATIONS NOT APPLICABLE:

401 KAR 63:021, *Existing sources emitting toxic air pollutants*

1. **Operating Limitations:** None
2. **Emission Limitations:** None
3. **Testing Requirements:** None
4. **Specific Monitoring Requirements:** None
5. **Specific Recordkeeping Requirements:** None
6. **Specific Reporting Requirements:** None
7. **Specific Control Equipment Operating Conditions:** None

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Unit 42 – BPM BFB Boiler:

EIS No.	Emission Point	Description
034	34(B-900)	Biofuel (BFB) Boiler

Installed: **June 1998**
Primary Fuel: **Wastewood/Hogged Fuel**
Secondary Fuel: **Natural gas, fuel oil (<0.50% sulfur content), propane, HVLC's**
Maximum Rated Capacity: **1050 mmBTU per hour:**
Hogged fuel input: 570 mmBTU/hr
NG fuel input: 480 mmBTU/hr
Description/purpose: **To process waste wood/hogged fuel for steam generation**
Control Equipment: **Electrostatic Precipitator**

APPLICABLE REGULATIONS:

401 KAR 59:015 *New indirect heat exchangers constructed after April 9, 1972*, applies to the particulate, sulfur dioxide and visible emissions.
401 KAR 60:005 (40 CFR 60 Subpart Db), *Standards of Performance for Industrial-Commercial-Institutional steam Generating Units* constructed after 1984
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

401 KAR 60:005 (40 CFR Subpart Dc) *Standards of Performance for Industrial-Commercial-Institutional steam Generating Units.*
401 KAR 60:005 (40 CFR 60 Subpart Da), *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978.* This Regulation will not apply since the source will not generate electricity to sell.

1. Operating Limitations:

a. Pursuant to 401 KAR 51:017, fuels shall include waste wood (hogged fuel), natural gas, propane, fuel oil with less than 0.50% sulfur content and High Volume Low Concentration (HVLC) off gases. Waste wood (Hogged Fuel) includes: waste wood, chips and bark, clarifier sludge, and any waste wood containing less than one percent by weight oil.
b. Pursuant to 401 KAR 51:017, No. 5 fuel oil may be used as a backup fuel for no more than 2 hours/day and 10 days/year at a rate not to exceed 7,703 gals/hr.
c. Pursuant to 401 KAR 51:017, low NOx burners shall be used.
c. Pursuant to 401 KAR 51:017, Section 9, emission rates specified under **Item 2** and the air pollution control equipment to control these emissions, **Item 7**, represents best available control technology (BACT); hence, all equipment, including control equipment, ESP, associated with the emission unit shall be operated and monitored, see **Item 4**, to

maintain emissions below the specified BACT emission rate.

Compliance Demonstration Method:

Refer to **Items 4, 5, and 6** under this emission point.

2. Emission Limitations:

a. Pursuant to 401 KAR 51:017, PM/PM10 emissions shall not exceed 0.10 lbs./mmBTU and 43.8 TPY.
b. Pursuant to 401 KAR 51:017, CO emissions shall not exceed 0.3 lbs./mmBTU, and 827.82 TPY.
c. Pursuant to 401 KAR 51:017, NOx emissions shall not exceed 0.25 lbs./mmBTU and 830.0 TPY.
d. Pursuant to 401 KAR 59:015, opacity shall not exceed 20 percent.
e. Pursuant to 401 KAR 51:017, SO_2 emissions shall not exceed 0.033 lbs./mmBTU and 73.67 TPY.
f. Pursuant to 401 KAR 51:017, VOC emissions measured as methane shall not exceed 0.10 lbs./mmBTU, and 257.54 TPY.

Compliance Demonstration Method:

a. For PM/ PM10 lbs./mmBTU emission limit:
Lbs/mmBTU PM/PM10 Emission Rate = [(Total Monthly gas, waste wood, hogged fuel or fuel oil consumption) x (Emission factor listed in Kentucky Emissions Inventory) / ((Total Hours of operation per month) x (Total Hourly Rated Capacity))]
b. For PM/PM 10 Annual emission limits:
Annual Emission Rate = Sum (any consecutive 12 month) of Natural Gas Usage Rate (10^6 cubic feet natural gas) x 5 (lbs./ 10^6 cubic feet) + Sum (any consecutive 12 month) of Fuel Oil Usage Rate (1000 gallons) x 2 (lbs./ 1000 gallons) + Sum (any consecutive 12 month) of Wood Waste Usage Rate (mmBTU) x Most Recent Stack Emission Factor (lbs./ mmBTU)
c. For SO2 lbs./mmBTU emission limit:
Lbs/mmBTU SO2 Emission Rate = [(Total Monthly gas, hogged fuel, fuel oil consumption rate, or wood waste) x (Emission factor listed in Kentucky Emissions Inventory) / ((Total Hours of operation per month) x (Total Hourly Rated Capacity))]
d. For SO2 Annual emission limits:
Annual Emission Rate = Sum (any consecutive 12 months) of Natural Gas Usage Rate (10^6 cubic feet natural gas) x 0.6 (lbs./10^6 cubic feet) + Sum (any consecutive 12 month) of Fuel Oil Usage Rate (1000 gallons) x 157 x (% Sulfur Content) (lbs./ 1000 gallons) + Sum (any consecutive 12 month) of Wood Waste Usage Rate (mmBTU) x Most Recent Stack Emission Factor (lbs./ mmBTU)
d. For NOx Annual emission limits:
Annual Emission Rate = Sum (any consecutive 12 months) Natural Gas Usage Rate (10^6 cubic feet natural gas) x 175 (lbs./ 10^6 cubic feet) + Sum (any consecutive 12

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month) of Fuel Oil Usage Rate (1000 gallons) x 24 (lbs./ 1000 gallons) + Sum (any consecutive 12 month) of Wood Waste Usage Rate (mmBTU) x Most Recent Stack Emission Factor (lbs./ mmBTU)

f. For CO lbs./mmBTU emission limit:
Lbs/mmBTU CO Emission Rate = [(Total Monthly gas, hogged fuel, fuel oil consumption, or wood waste rate) x (Most Recent Stack Emission Factor) / ((Total Hours of operation per month) x (Total Hourly Rated Capacity))]

g. For CO Annual emission limits:
Annual Emission Rate = Sum (any consecutive 12 month) of Natural Gas Usage Rate (10^6 cubic feet natural gas) x 84 (lbs./ 10^6 cubic feet) + Sum (any consecutive 12 month) of Fuel Oil Usage Rate (1000 gallons) x 5 (lbs./ 1000 gallons) + Sum (any consecutive 12 month) of Wood Waste Usage Rate (mmBTU) x Most Recent Stack Emission Factor (lbs./ mmBTU)

h. For VOC lbs./mmBTU emission limit:
Lbs/mmBTU VOC Emission Rate = [(Total Monthly gas, fuel oil consumption, or wood waste rate) x (Most Recent Stack Emission Factor) / ((Total Hours of operation per month) x (Total Hourly Rated Capacity))]

i. For VOC Annual emission limits:
Annual Emission Rate = Sum (any consecutive 12 month) of Natural Gas Usage Rate (10^6 cubic feet natural gas) x 5.5 (lbs./ 10^6 cubic feet) + Sum (any consecutive 12 month) of Fuel Oil Usage Rate (1000 gallons) x 0.76 (lbs./ 1000 gallons) + Sum (any consecutive 12 month) of Wood Waste Usage Rate (mmBTU) x Most Recent Stack Emission Factor (lbs./ mmBTU)

j. For NOx lbs./mmBTU emission limit:
Lbs/mmBTU NOx Emission Rate = [(Total Monthly gas, fuel oil consumption rate, or wood waste) x (Most Recent Stack Emission Factor) / ((Total Hours of operation per month) x (Total Hourly Rated Capacity))]

k. For NOx Annual emission limits:
Annual Emission Rate = Sum (any consecutive 12 months) Natural Gas Usage Rate (10^6 cubic feet natural gas) x 175 (lbs./ 10^6 cubic feet) + Sum (any consecutive 12 month) of Fuel Oil Usage Rate (1000 gallons) x 24 (lbs./ 1000 gallons) + Sum (any consecutive 12 month) of Wood Waste Usage Rate (mmBTU) x Most Recent Stack Emission Factor (lbs./ mmBTU)

l. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under Subsection 4 - **Specific Monitoring Requirements** and Subsection 5 - **Specific Recordkeeping Requirements** during all periods.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted. The most recent stack test results shall be reported and incorporated into the Kentucky Emissions Inventory.

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4. Specific Monitoring Requirements:

a. Pursuant to 40 CFR 60.48b, to meet the periodic monitoring requirement for opacity, the permittee shall use a continuous opacity monitor (COM). Excluding the startup, shutdown, and once per hour exemption periods, if three consecutive six-minute average opacity values exceed the opacity standard, the permittee shall, as appropriate, initiate an inspection of the process equipment, control equipment and/or COM system and make any necessary repairs. During periods when the COM is not in proper operation and there are visible emissions from the stack, the permittee shall determine the opacity of emissions by Reference Method 9 on a daily basis. The Method 9 readings shall be performed by a representative of the permittee certified in Visible Emissions Evaluations, and the permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and their date of certification. If a Method 9 cannot be performed, the reason for not performing the test shall be documented.

b. Pursuant to 40 CFR 60.48b, to meet the periodic monitoring requirement for nitrogen oxides (NO_x), the permittee shall use a continuous emissions monitor (CEM) to monitor the concentration of NO_x emissions on a dry basis and the percent of oxygen by volume on a dry basis of gases discharged in order to calculate lbs/mmBTU. Excluding the startup and shutdown periods, if any 24-hour average NO_x value exceeds the emission standard, the permittee shall, as appropriate, initiate an investigation of the cause of the exceedance and/or the CEM system and make any necessary repairs or take corrective actions as soon as practicable.

c. Pursuant to State Regulation 401 KAR 51:017, the Permitttee shall monitor the average boiler bed temperature, and percent oxygen on a 24-hr basis or other parameters which have been demonstrated to correlate to CO and VOC emissions and which have acceptable ranges established during stack tests.

d. The permittee shall monitor total monthly (each calendar month) heat input (mmBTU) to the BFB Boiler including the monthly usage rates of waste wood, natural gas, propane, and fuel oil.

e. The permittee shall monitor the hours per month of operation for the unit.

5. Specific Recordkeeping Requirements:

a. Pursuant to 40 CFR 60.49b, all 6-minute average opacities equal to or exceeding 20 % shall be recorded.

b. One hour and thirty-day average NOx concentrations shall be recorded.

c. Summarize total heat input (mmBTU) monthly, and

e. From this, estimate and record the $PM_{10,}$ CO, NOx, $SO_{2,}$ and VOC emissions monthly.

f. The permittee shall maintain records, including dates, usage rates, time, and duration, when the BFB Boiler is on each specific fuel.

g. The permittee shall maintain records of a 24-hr average boiler bed temperature and 24-hr average percent oxygen.

h. See specific monitoring requirements, above.

i. Records in the daily/weekly/monthly log shall include but not limited to the following:
   i. Whether any air emissions were visible from the unit.

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ii. Whether the visible emissions were normal for the unit.
iii. The cause of any abnormal emissions and any corrective action taken.

6. Specific Reporting Requirements:

a. The 24-hr NOx rolling average in excess of standard shall be submitted semiannually.
b. Any period during which the opacity is equal to or exceeds 20 percent will be reported quarterly, except startup and shutdown.
c. Pursuant to a requested stack test, the permittee shall provide at least 30 days prior notice of any performance test [CFR 60.8(d)]. No later than 180 days after startup of the facility, the permittee shall conduct performance test(s) and furnish a written report of the results of such performance test(s) [40 CFR 60.8(a)].

7. Specific Control Equipment Operating Conditions:

a. The electrostatic precipitator shall be operated in accordance with the manufacturer's specifications and/or standard operating procedures.
b. Records regarding the maintenance of the control equipment shall be maintained.

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Unit 43 – BPM Bleach Mill Pulp Dryer System:

EIS No.	Emission Point	Description
024	43 (B-1000)	Pulp Dryer System

Installed: **July 1969**
Maximum Rated Capacity: **167,900 air dried tons yr of pulp**
Description/purpose: **To manufacture market pulp**

APPLICABLE REGULATIONS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

REGULATIONS NOT APPLICABLE:

401 KAR 63:021, *Existing sources emitting toxic air pollutants*

1. **Operating Limitations:**

   When the Permittee is processing at or below the maximum rate, the facility is in compliance with 401 KAR 63:020. Increase in capacity will require prior notice including modeling to show compliance.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

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Unit 44 –BPM Chips & Wood Fuel Unloading:

EIS No.	Emission Point	Description
035	35(B – 1100,B-1101)	BPM Truck Railcar Unloading

Installed: **April 1998**
Maximum Rated Capacity: **2,628,000 tons per year**
Description/purpose: **To unload chips for the manufacture of pulp and to unload wood fuel.**

APPLICABLE REGULATIONS:
401 KAR 59:010, *New process operations*
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

NA

1. **Operating Limitations:**

   a. Pursuant to 401 KAR 51:017, the processing rate through railcar or truck unloading shall not exceed 350 tons/hour.
   b. Pursuant to 401 KAR 51:017, Section 9, emission rates specified under **Item 2** represents best available control technology (BACT); hence, all equipment, process or control equipment, associated with the emission unit shall be operated and monitored, see **Item 4**, to maintain emissions below the specified BACT emission rate.

   Compliance Demonstration Method:

   Please refer to **Items 4 and 5** under this emission point.

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 51:017, PM/PM10 emissions shall not exceed 0.09 lbs./hr and 0.4 tons/year.
   b. Pursuant to 401 KAR 59:010, Section 3, visible emissions shall not equal or exceed an opacity reading of 20 %.

   Compliance Demonstration Method:

   a. For PM/PM10 hourly emission limits:
      Hourly Emission Rate = [Monthly Processing Rate (tons) of (Chips & Wood Fuel Unloading) x $3.0*10^{-5}$ lbs./ton*)/Monthly hours of operation].
      * Based On Available Emission Factors from EPA, NCASI, and Equipment Manufacturer

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b. For PM/PM10 annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Processing Rate (tons) of (Chips & Wood Fuel Unloading) x ($3.0*10^{-5}$ lbs./ton*)]
* Based On Available Emission Factors from EPA, NCASI, and Equipment Manufacturer

c. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under Subsection 4 – **Specific Monitoring Requirements** and Subsection 5 – **Specific Record- keeping Requirements** during all periods.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information:
   i. The total monthly (each calendar month) usage of chips and wood fuel.
   ii. The hours per month of operation for the units.

b. Once per day when the unit is operating, the permittee shall survey for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9.

5. Specific Recordkeeping Requirements:

Records in the daily/weekly/monthly log shall include but not limited to the following:
i. Whether any air emissions were visible from the unit.
ii. Whether the visible emissions were normal for the unit.
iii. The cause of any abnormal emissions and any corrective action taken.

6. Specific Reporting Requirements:

Refer to **Section F**.

7. Specific Control Equipment Operating Conditions:

None

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Unit 45 – BPM Chips & Wood Fuel Handling:

EIS No.	Emission Point	Description
010	36 (B-1200)	Chip Screening
	(B-1201)	Chip & Wood Fuel Reclaiming
	(B-1202)	& Transfer Chip Piles

Installed: **April 1998**
Maximum Rated Capacity: **2,774,000 tons per year**
Description/purpose: **To transport chips to the pulping process and wood fuel to the boilers.**

APPLICABLE REGULATIONS:

401 KAR 59:010, *New process operations*
401 KAR 51:017, *Prevention of significant deterioration of air quality*

REGULATIONS NOT APPLICABLE:

NA

1. **Operating Limitations:**

   Pursuant to 401 KAR 51:017, the processing rate through these all units shall not exceed 350 tons/hour.

   Compliance Demonstration Method:

   Please refer to **Items 4 and 5** under this emission point.

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 51:017, PM/PM10 emissions shall not exceed 0.274 lbs./hr and 1.2 tons/year.
   b. Pursuant to 401 KAR 59:010, Section 3, visible emissions shall not equal or exceed an opacity reading of 20 %.

   Compliance Demonstration Method:

   a. For PM/PM10 hourly emission limits:
      Hourly Emission Rate = [Monthly Processing Rate (tons) of (Chips & Wood Fuel Handling) x ($1.4*10^{-4}$ lbs./ton*)/Monthly hours of operation].
      * Based On Available Emission Factors from EPA, NCASI, and Equipment Manufacturer

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b. For PM/PM10 annual emission limits:
Annual Emission Rate = [Sum (any consecutive 12 month) Production Rate (tons) of (Chips & Wood Fuel Handling) x ($1.4*10^{-4}$ lbs./ton*)].
* Based On Available Emission Factors from EPA, NCASI, and Equipment Manufacturer

c. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under Subsection 4 – **Specific Monitoring Requirements** and Subsection 5 – **Specific Record- keeping Requirements** during all periods.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. The permittee shall monitor and maintain records of the following information:
   i. The total monthly (each calendar month) chip processing for Unit 45.
   ii. The hours per month of operation for the unit.

b. Once per day when Unit 45 is operating, the permittee shall survey for visible emissions. If visible emissions are observed, the permittee shall perform an EPA Method 9.

5. Specific Recordkeeping Requirements:

Records in the daily/weekly/monthly log shall include but not limited to the following:
i. Whether any air emissions were visible from the unit.
ii. Whether the visible emissions were normal for the unit.
iii. The cause of any abnormal emissions and any corrective action taken.

6. Specific Reporting Requirements:

Refer to **Section F**.

7. Specific Control Equipment Operating Conditions: None

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Unit 46 – BPM No. 2 Power Boiler (Natural Gas Fired):

EIS No.	Emission Point	Description
002	46 (B – 1320)	Power Boiler

Installed: April 1969
Primary Fuel: Natural gas
Secondary Fuel: Propane
Maximum Rated Capacity: 150 mmBTU per hour
Description/purpose: Steam generation-backup boiler

APPLICABLE REGULATIONS:

401 KAR 61:015, *Existing indirect heat exchangers*

REGULATIONS NOT APPLICABLE:

This Boiler was constructed in 1967, or is not part of a utility generating system; hence, the following are not applicable:

401 KAR 60:005 (40 CFR 60 Subpart D), *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971*
401 KAR 60:005 (40 CFR 60 Subpart Da), *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978*
401 KAR 60:005 (40 CFR Subpart Db), *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units* constructed after 1984
401 KAR 60:005 (40 CFR Subpart Dc), *Standards of Performance for Industrial-Commercial-Institutional steam Generating Units*. Applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu per hour (Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

1. **Operating Limitations:**

   Propane shall be the only alternate fuel.

   Compliance Demonstration Method:
   Maintain log of date and duration when propane is used as an alternate fuel.

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 61:015, Section 4, PM emissions shall not exceed 0.275 lbs./hr.
   b. Pursuant to 401 KAR 61:015, Section 4, visible emissions shall not equal or exceed an opacity reading of 20 %.

c. 401 KAR 61:015, Section 5, SO2 emissions shall not exceed 3.6 lbs./mmBTU.

Compliance Demonstration Method:

a. For PM hourly emission limits:
   Hourly Emission Rate = [Monthly Production Rate (lbs./mmBTU) of (No. 2 Power Boiler Production) x (0.0015 lbs./mmBTU*)/Monthly hours of operation].
   * Based On Available Emission Factors from EPA, NCASI, and Equipment Manufacturer
b. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under Subsection 4 – **Specific Monitoring Requirements** and Subsection 5 – **Specific Record- keeping Requirements** during all period.
c. Compliance is assumed with SO2 limits while burning natural gas or propane.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2), 401 KAR 50:045, Section 1 and 40 CFR 60.8 performance testing of non-HAPS using Reference Methods specified in 401 KAR 50:015 shall be conducted if required by the Division.

4. Specific Monitoring Requirements:

a. Pursuant to 401 KAR 61:015 Section 6, the rate of fuel burned for each fuel shall be measured monthly and recorded. When the boiler is in operation, the heating value and ash content of all fuels shall be ascertained at least once per month and recorded.
b. The permittee shall monitor and maintain records of the following information:
   i. The total monthly (each calendar month) power production of No. 2 Power Boiler.
   ii. The hours per month of operation for the unit.
c. Once per day when the unit is operating, the permittee shall survey visible emissions associated with emission point B-1320. If visible emissions are observed, the permittee shall perform an EPA Method 9.
   i. The Method 9 readings shall be performed by a representative of the permittee certified in Visible Emissions Evaluations
   ii. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and their date of certification.

5. Specific Recordkeeping Requirements:

For compliance demonstration purposes, the permittee shall:
a. Summarize total power production of the No. 2 Power Boiler monthly, and
b. From this, estimate and record the emissions monthly.
c. See the specific monitoring required, above.
d. Records in the daily/weekly/monthly log shall include but not limited to the following:

i. Whether any air emissions were visible from the unit.
ii. Whether the visible emissions were normal for the unit.
iii. The cause of any abnormal emissions and any corrective action taken.

6. Specific Reporting Requirements:

Refer to **Section F**.

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS
Unit 47 – BPM Gasoline Storage Tank:

EIS No.	Emission Point	Description
027	47 (B – 1400)	Gasoline Storage Tank

Installed: December 1989
Maximum Rated Capacity: 1000 gallons maximum storage capacity
Description/purpose: Storage of vehicle fuel

APPLICABLE REGULATIONS:
401 KAR 59:050 *New storage vessels for petroleum liquids* constructed on or after April 9, 1972 and prior to July 24, 1984 with a storage capacity less than or equal to 151,400 liters (40,000 gallons), and to each affected facility with a storage capacity less than 40,000 liters (10,567 gallons) constructed on or after July 24, 1984, which is located in an urban county designated nonattainment for ozone under 401 KAR 51:010 or in any other county and is a part of a major source of volatile organic compounds.

REGULATIONS NOT APPLICABLE:
401 KAR 61:050 *Standards of Performance of Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and prior to May 19, 1978*
401 KAR 60:005 (40 CFR Subpart K), *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.*
(40 CFR 60 Subpart Ka), *Standards of Performance for Storage Vessels for Petroleum Liquids for which Construction, Reconstruction, or Modification Commenced after May 18, 1978, and prior to July 23, 1984*
(40 CFR 60 Subpart Kb), *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*

1. **Operating Limitations:**

   Each storage vessel that commenced construction on or after April 9, 1972, that has a storage capacity greater than 2,195 liters (580 gallons), and if the true vapor pressure of the petroleum liquid, as stored, is equal to or greater than ten and three-tenths (10.3) kPa (one and five-tenths (1.5) psia), as a minimum shall be equipped with a permanent submerged fill pipe [401 KAR 59:050, Section 3(b)(2)].

   Compliance Demonstration Method:

   Maintain tank diagrams/blueprints to verify the existence of the submerged fill pipe.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:**
   Maintain Design Drawings on site.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 48 – BPM Methanol Storage Tank:

EIS No.	Emission Point	Description
045	48 (B – 1500)	Methanol Storage Tank

Installed: February 1998
Maximum Rated Capacity: less than 20,000 gallons maximum storage capacity
Description/purpose: To store methanol until utilized to manufacture chlorine dioxide

APPLICABLE REGULATIONS:
401 KAR 60:005 (40 CFR 60 Subpart Kb), *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*
401 KAR 63:020, *Potentially hazardous matter or toxic substances*

REGULATIONS NOT APPLICABLE:
401 KAR 63:021, *Existing sources emitting toxic air pollutants*

1. **Operating Limitations:**

   When the Permittee is processing at or below the maximum rate, the facility is in compliance with 401 KAR 63:020. Increase in capacity will require prior notice including modeling to show compliance.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:**

   a. Pursuant to 40 CFR 60.116b, the facility shall keep readily accessible records showing the dimensions of the storage vessels and an analysis showing the capacity of the storage vessels.
   b. Pursuant to 40 CFR 60.116b(c), the facility shall maintain a monthly record of the VOL stored in the vessel, and initially determine the maximum true vapor pressure of that VOL and maintain records of changes in the material stored in the vessel.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 49 – BPM Brown Stock HD Storage:

EIS No.	Emission Point	Description
044	49 (B – 1600, B1601)	Brown Stock HD Storage

Installed: **December 1996**
Maximum Rated Capacity: **632,700 air dried tons per year**
Description/purpose: **Used to store unbleached pulp until processed in the pulp bleaching process.**

APPLICABLE REGULATIONS: None

REGULATIONS NOT APPLICABLE: None

1. **Operating Limitations:** None
2. **Emission Limitations:** None
3. **Testing Requirements:** None
4. **Specific Monitoring Requirements:** None
5. **Specific Recordkeeping Requirements:** None
6. **Specific Reporting Requirements:** None
7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 50 – BPM Bleached Pulp HD Storage:

EIS No.	Emission Point	Description
040	50 (B-1700, B-1701, B-1702, B-1703)	4 Bleached Pulp HD Storage Tanks

Installed: **December 1996**
Maximum Rated Capacity: **601,900 air dried tons per year**
Description/purpose: **Used to store bleached pulp until it is utilized to manufacture market pulp or paper.**

APPLICABLE REGULATIONS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

REGULATIONS NOT APPLICABLE:

401 KAR 60:005 (40 CFR 60 Subpart Kb), *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.* This vessel is defined to be a process tank which is exempt from regulation.

401 KAR 63:021, *Existing sources emitting toxic air pollutants*

1. **Operating Limitations:**

   When the Permittee is processing at or below the maximum rate, the facility is in compliance with 401 KAR 63:020. Increase in capacity will require prior notice including modeling to show compliance.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 51 – K-1 Paper Machine:

EIS No.	Emission Point	Description
041	51 (F-1),	Vacuum Pump
	(F-2)	Size Press
	(F-3)	Reel Pulper
	(F-4, F-5, F-6, F-7, F-8, F-9)	Dryer Hoods
	(F-10)	Fugitives

Installed: **December 1980**
Maximum Rated Capacity: **227,185 oven dried tons per year**
Description/purpose: **Used to manufacture paper**

APPLICABLE REGULATIONS: None

REGULATIONS NOT APPLICABLE: None

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 52 – K-2 Paper Machine:

EIS No.	Emission Point	Description
037	52 (F-20)	Vacuum Pump
	(F-21)	Size Press
	(F-22)	Reel Pulp
	(F-23, F-24, F-25, F-26, F-27, F-28)	Dryer Hoods
	(F-29)	Fugitives

Installed: **June 1998**
Maximum Rated Capacity: **422,466 oven dried tons per year**
Description/purpose: **Used to manufacture paper**

APPLICABLE REGULATIONS: None

REGULATIONS NOT APPLICABLE: None

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 53 – K-1&2 Paper Machine Stock Preparation:

EIS No.	Emission Point	Description
042	53 (F – 30)	Broke Chests
	(F – 31)	Hardwood Chests
	(F – 32)	Surge Chests

Installed: **June 1998**
Maximum Rated Capacity: **649,651 oven dried tons per year**
Description/purpose: **To prepare and store pulp prior to its being manufactured into paper**

APPLICABLE REGULATIONS:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*

REGULATIONS NOT APPLICABLE:

401 KAR 60:005 (40 CFR 60 Subpart Kb), *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984*

401 KAR 63:021, *Existing sources emitting toxic air pollutants*

1. **Operating Limitations:**

   When the Permittee is processing at or below the maximum rate, the facility is in compliance with 401 KAR 63:020. Increase in capacity will require prior notice including modeling to show compliance.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:**

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Unit 54 K-1&2 Starch Silos:

EIS No.	Emission Point	Description
043	54 (F-40, F-42)	K-1 & K-2 Wet End Starch Silos
	(F-41, F-43)	K-1 & K-2 Dry End Starch Silos

Installed: **June 1998**
Maximum Rated Capacity: **29,930 tons per year**
Description/purpose: **To provide storage of dry starch during the period it is unloaded from transport vehicle until it is utilized in the paper making process.**

APPLICABLE REGULATIONS:
401 KAR 59:010, *New process operations*

REGULATIONS NOT APPLICABLE:
NA

1. **Operating Limitations:** None

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 59:010, Appendix A, the emissions of particulate matter shall not exceed the allowable rate limit as calculated by the following equations using the process weight rate (in units of tons/hr).

   For process rates up to 1,000 lbs/hr: $E = 2.34$
   For process rates up to 60,000 lbs/hr: $E = 3.59\ P^{0.62}$
   For process rates in excess of 60,000 lbs/hr: $E = 17.31\ P^{0.16}$

   For the equations: E = rate of emission in lb/hr and P = process weight rate in tons/hr (monthly throughput in tons/monthly hours of operation).

   b. Pursuant to 401 KAR 59:010, Section 3, visible emissions shall not equal or exceed an opacity reading of 20%.

Compliance Demonstration Method:

a. For PM hourly emission limits:
   Hourly Emission Rate = [Monthly Processing Rate (tons) of (Starch Silos Production) x (0.027* lbs./ton)/Monthly hours of operation].
   * Based On Available Emission Factors from EPA, NCASI, and Equipment Manufacturer

b. Compliance with the opacity limits shall be demonstrated through the following methods: The permittee shall perform the monitoring and recordkeeping requirements listed under

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Subsection 4 – **Specific Monitoring Requirements** and Subsection 5 – **Specific Record- keeping Requirements** during all periods.

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:**

   Once per day when the unit is operating, the permittee shall survey visible emissions associated with Unit 54. If visible emissions are observed, the permittee shall perform an EPA Method 9.

5. **Specific Recordkeeping Requirements:**

   For compliance demonstration purposes, the permittee shall:
   a. Summarize total material processed of the Starch Silos monthly, and
   b. From this, estimate and record the average hourly emission rate monthly.
   c. Records in the daily/weekly/monthly log shall include but not limited to the following:
      i. Whether any air emissions were visible from the unit.
      ii. Whether the visible emissions were normal for the unit.
      iii. The cause of any abnormal emissions and any corrective action taken.

6. **Specific Reporting Requirements:**
   None

7. **Specific Control Equipment Operating Conditions:**
   None

SECTION C – INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant, the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

Kentucky Mills

FACILITY DESCRIPTION	CAPACITY (size/rate)	Applicable Regulations
KMM Chip Preparation-Ceased Operation	1,000 tons/day	401 KAR 63:010
KMM HO Screen Conveyor Fan-Ceased Operation	1,500 tons/day	401 KAR 63:010
KMM Recycle Pulp Area-Ceased Operation	550 tons/day	none
Demineralization	4,000,000 gallons/day	none
KMM Condensate	8,000 gallons	none
KMM Mineral Spirits Tank-Ceased Operation	8,000 gallons	none
KMM Fuel Oil Tank	158,000 gallons	none
KMM Used Oil Tank	1,000 gallons	none
KMM Sulfite Storage Hopper-Ceased Operation	7,100 ft^3	none
KMM Kerosene	300 gallons	none
Residual Inert Landfills	110,000 yd^3/year	none
Biospan Methane Generator-Ceased Operation	2,400 m^3/day	none
BPM Chemical Prep Area	600,000 ADTP/year	none
BPM Dryer Machine Fugitives	460 ADTP/day	401 KAR 63:010
BPM Fuel Oil Storage Tank	300,650 gallons	none
BPM Diesel Fuel Storage Tank	5,000 gallons	none
BPM Road Diesel Fuel Storage Tank	10,000 gallons	none
BPM Kerosene Storage Tank	300 gallons	none
PCC Plant	850 MDT/day	401 KAR 63:010
BPM Contaminated Water & Filtrate Storage Tank	70 ODT/hour	none
K-1 Machine Stock Preparation Tanks	292,000 ADTFP/year	none
K-1 Machine Chemical	243,000 ODTFP/year	none

FACILITY DESCRIPTION	**CAPACITY (size/rate)**	**Applicable Regulations**
Preparation		
K-2 Machine Chemical Preparation	694,980 ODTFP/year	none
Plant Cooling Towers	18,000,000 gallons/day	none
Rollover Chip Dump Ventilation System	13,160 cubic feet/minute	none
H-2 Paper Machine vacuum pumps (2)	55.2 ADT/hr	none
Unit 42 – BPM BFB Boiler sludge processing	3.69 lbs/hr sludge blend rate	none

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. Particulate, sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds, and visible (opacity) emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.
2. Continuous opacity monitoring systems shall be used to determine compliance with the opacity standards for Emission Units 27 and 29 instead of U.S. EPA Reference Method 9.
3. Compliance with annual emissions and processing limitations imposed pursuant to 401 KAR 52:020, Section 10, and contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
4. The Method 9 readings shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and their date of certification.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

1. Pursuant to Regulation 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

2. Pursuant to 40 CFR 63.6(e)(3), the permittee shall develop and implement a written startup, shutdown, and malfunction plan that describes the procedures for operating and maintaining the emission units subject to 40 CFR 63, Subpart S and Subpart MM during periods of startup, shutdown, and malfunction and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standards specified in 40 CFR 63, Subpart S or Subpart MM.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within *30 days*. Other deviations from permit requirements shall *be included in the semiannual report required by Section F.6* [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Owensboro Regional Office
3032 Alvey Park Dr. Suite 700
Owensboro , KY 42303

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

11. Pursuant to Section VII (3) of the policy manual of the Division for Air Quality as referenced in 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a,4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

SECTION G - GENERAL PROVISIONS (CONTINUED)

16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
(a) Applicable requirements that are included and specifically identified in the permit and
(b) Non-applicable requirements expressly identified in this permit.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:02+0 Section 8(2)].

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements
Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, in accordance with the terms and conditions of this permit.

1. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this

SECTION G - GENERAL PROVISIONS (CONTINUED)

permit.

2. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

3. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

4. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance test on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements.

6. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

7. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least ten

(10) days prior to the test.

8. Pursuant to Section VII 1.(2 and 3) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), if a demonstration of compliance, through performance testing was made at a production rate less than the maximum specified in the application form, then the permittee is only authorized to operate at a rate that is not greater than 110% of the rate demonstrated during performance testing. If and when the facility is capable of operation at the rate specified in the application, compliance must be demonstrated at the new production rate if required by the Division.

(e) Acid Rain Program Requirements

1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
   d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
   e. This requirement does not relieve the source of other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

   RMP REPORTING CENTER
   P.O. Box 3346
   Merrifield, VA, 22116-3346

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H - ALTERNATE OPERATING SCENARIOS

NA

SECTION I - COMPLIANCE SCHEDULE

To implement any new monitoring, recordkeeping or reporting requirements included in this permit, the Division hereby authorized one-hundred eighty (180) day compliance schedule, beginning with issuance of the final permit.

Within 180 days of final permit issuance the permittee shall establish control device operating parameters (acceptable ranges) for those not reported in the Title V operating permit application.

Pursuant to the respective facility, the permittee shall comply with all compliance dates specified in 40 CFR 63 Subpart S.

Facility/emission unit	Limit, or requirement	Compliance Date	Reference
Each existing source	NA	April 16, 2001	40 CFR 63.440(d), except as specified by 40 CFR 63.440(d)(1) through (d)(3)
Each LVHC system: digester, turpentine recovery, evaporator, and steam stripper systems	NA	Expeditiously as practicable, but in no event later than April 17, 2006	40 CFR 63:443(a)(1)(i) and milestones dates specified at 40 CFR 63.440(d)
Each knotter	Each knotter system with emissions of 0.05 kilograms or more of total HAP per megagram of ODP (0.1 pounds per ton). Milestone	Expeditiously as practicable, but in no event later than April 17, 2006	40 CFR 63:443(a)(1)(ii) 40 CFR 63.440(d)
or screen	Each screen system with emissions of 0.10 kilograms or more of total HAP per megagram of ODP (0.2 pounds per ton). Milestones		40 CFR 63:443(a)(1)(ii)(B) see page before

Each pulping system: digester	The control device used to reduce total HAP emissions shall: (1) Reduce total HAP emissions by 98 percent or more by weight; or (2) Reduce the total HAP concentration at the outlet of the thermal oxidizer to 20 parts per million or less by volume, corrected to 10 percent oxygen on a dry basis; or (3) Reduce total HAP emissions using a thermal oxidizer designed and operated at a minimum temperature of 871 °C (1600 °F) and a minimum residence time of 0.75 seconds; or (4) Reduce total HAP emissions using a boiler, lime kiln, or recovery furnace by introducing the HAP emission stream with the primary fuel or into the flame zone.	Expeditiously as practicable, but in no event later than April 17, 2006	40 CFR 63:443(d)
Each pulp washing system	Same as above	Expeditiously as practicable, but in no event later than April 17, 2006	40 CFR 63:443(a)(1)(iii)
Each decker system	Same as above	Expeditiously as practicable, but in no event later than April 17, 2006	40 CFR 63:443(a)(1)(iv)
Each oxygen delignification system	Same as above	Expeditiously as practicable, but in no event later than April 17, 2006	40 CFR 63:443(a)(1)(v)
Bleaching system: Chlorine	(1) Reduce the total chlorinated HAP mass in the vent stream	April 16, 2001/ April 15, 2004	40 CFR 63:445(c)(1)-(c)(3)

Dioxide Generator, No.2 ClO_2 Bleach Plant, and No.3 ClO_2 Bleach Plant	entering the control device by 99 percent or more by weight; (2) Achieve a treatment device outlet concentration of 10 parts per million or less by volume of total chlorinated HAP; or (3) Achieve a treatment device outlet mass emission rate of 0.001 kg of total chlorinated HAP mass per megagram (0.002 pounds per ton) of ODP. Each bleaching system shall comply with the Voluntary Advanced Technology Incentives Program for Effluent Limitation Guidelines in 40 CFR 430.24,		40 CFR 63:440(d)(3)
Enforceable effluent limitations guidelines for 2,3,7,8-tetra-chloro-dibenzo-p-dioxin and adsorbable organic halides, and removal in the bleaching process including chemical and steam mixers, bleaching towers, washers, seal (filtrate) tanks, vacuum pumps, and any other	BAT levels set out in 40 CFR 430.24(a)(1)	April 16, 2001	40 CFR 63:440(d)(3)(ii)(B)(*2*)

equipment serving the same function			
Reporting requirement for facilities listed above			40 CFR 63:455(a) and (b)

Pursuant to the respective facility, the permittee shall comply with all compliance dates specified in 40 CFR 63 Subpart MM.

Facility/ emission unit	Limit, or requirement	Compliance Date	Reference
Recovery Boiler No. 3 and Recovery Boiler No. 4	The concentration of PM in the exhaust gases discharged to the atmosphere shall be less than or equal to 0.10 gram per dry standard cubic meter (g/dscm) (0.044 grain per dry standard cubic foot (gr/dscf)) corrected to 8 percent oxygen.	No later than March 13, 2004	40 CFR 63.863(a) and 40 CFR 63.862(a)(1)(i)(A).
Smelt Tank No. 3 and Smelt Tank No. 4	The concentration of PM in the exhaust gases discharged to the atmosphere shall be less than or equal to 0.10 kg/Mg (0.20 lbs./ton) of black liquor solids fired.	No later than March 13 , 2004	40 CFR 63.863(a) and 40 CFR 63.862(a)(1)(i)(B)
Lime Kiln No. 3	The concentration of PM in the exhaust gases discharged to the atmosphere shall be less than or equal to 0.15 g/dscm (0.064 gr/dscf) corrected to 10 percent oxygen.	No later than March 13,, 2004	40 CFR 63.863(a) and 40 CFR 63.862(a)(1)(i)(C)

SECTION J - ACID RAIN

None